MEDICAL AND SURGICAL REPORTER

No. 1671. PHILADELPHIA, MARCH 9, 1889. Vol. LX.—No. 10.

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LECTURE.

ANÆSTHETICS.[1]

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Gentlemen: The various methods of producing anæsthesia for surgical purposes at the present day are deserving of the most careful study and consideration. The number and variety of surgical operations have so enormously increased under the influence of the discovery of antisepsis that the problem of how most safely to produce unconsciousness has become one of correspondingly increased importance. I shall try to review the subject as well as can be done within the limits of an hour, confining myself to the fundamental principles involved and using freely such teachings and writings as are considered authoritative.

The agents employed as anæsthetics may be included under the following heads: 1. Alcohol. 2. Chloroform. 3. Ethers. 4. Methylene 5. Nitrous Oxide.

The first four in all probability act in a somewhat similar manner in producing anæsthesia, *i.e.*, they directly affect the nerve centres; but their secondary effects are altogether different.

Alcohol may be dismissed in a few words. The narcosis which it produces when swallowed is unfortunately familiar by observation to almost every one, in the shape of profound intoxication, but it may also be brought about by inhalation as is the case with the other anæsthetics. Alcoholic narcosis, however, is much more persistent and consequently much more dangerous than that of the more volatile anæsthetics which are absorbed and eliminated with greater rapidity. Unconsciousness can be produced in this way only by a much greater expenditure of time. The preliminary period of excitement is vastly

[1] A lecture delivered to the Graduating Class of the University of Pennsylvania, Session 1888-1889.

more prolonged, the patient is far more uncontrollable, and the resulting narcosis will sometimes persist for hours. The drug is therefore not used at the present time as an anæsthetic, and requires no further consideration.

CHLOROFORM.—In this country chloroform is employed as an anæsthetic, by the great majority of surgeons, only in those cases in which the other anæsthetics have failed, or in those exceptional operations, such as staphylorraphy, in which it is especially desirable to prevent coughing and the hypersecretion of bronchial and laryngeal mucus. It is still used largely in obstetric practice, and is said to be far safer when given to children than when employed with adults. So far as I know no satisfactory explanation of this fact, if it be a fact, has yet been advanced.

Chloroform undoubtedly has certain advantages over ether. It is cheaper, it acts in smaller quantity, its local anæsthetic action is greater than that of ether, and hence there is not so much mucus thrown out from the throat and lungs; it is not so apt to be followed by nausea and vomiting; being less volatile it does not so completely fill the pulmonary spaces with its vapor, and there is less of the suffocating feeling which most patients have when they take ether.

These are, I believe, all the advantages that can possibly be claimed for chloroform. To counterbalance them we have the one all-important fact, that chloroform has killed about one person out of every 2600 to whom it has been administered. The individuals to whom it is safe to give it cannot with any certainty be selected beforehand. In many cases the autopsies have disclosed no evidence of disease of any sort. The patients have simply died "poisoned."

We have, as yet, no conclusive evidence or statistics to enable us to balance the merits of the different anæsthetics in a perfectly mathematical manner. We know that between the years 1870 and 1885, 184 deaths have been published in England as occurring under chloroform, which is slightly over 12 in a year. The number of times that chloroform has been administered in the same period is not known. At Saint Bartholomew's from 1875 to 1880, chloroform had been used 4810 times with two deaths. Mr. Williams has recorded, as his personal experience, 208 cases of chloroforming with one death. On the other hand, between 1870 and 1885, 28 cases of death from ether in England alone have been recorded. Saint Bartholomew's tables give 6440 cases with two deaths; Mr. Williams 1050 cases with one death.

Of course, in giving any anæsthetic it is highly important that the lungs, the heart, and the kidneys should be sound. But this is far more important or essential in giving chloroform than in giving any of the others. It has so high a boiling point and is therefore volatilized with such comparative slowness that it is probably never eliminated entirely by the lungs, but only with the aid of the excretory organs generally.

If the lungs have a smaller area than usual on account of disease, just so much more strain is thrown on the kidneys, and if in addition they are contracted or fatty, the danger is greatly increased. It is, however, usually by its depressant action on the heart that chloroform kills, and it seems highly probable that it often does this by the property which it has been shown to have, of destroying the contractile power of the cardiac muscle when it reaches it in a sufficiently concentrated form.

Various circumstances may greatly affect the degree of its concentration in the lungs and circulation, and thus increase, or decrease, the danger of its employment. Of these the most important are those connected with the character of the respiration of the patient and the circulation through the lungs. For example, a given quantity of chloroform, say one drachm, will exert its greatest effect when the respiration is deep and quick, because the vapor is then carried, in any given moment of time, in larger quantity into the air spaces of the lungs. If, at the same time, the patient, being only partially anæsthetized, stops suddenly after breathing deeply, *i. e.*, closes his glottis and strains, he increases the rapidity of absorption of the chloroform vapor into the blood; or if the movement of blood through the lungs is exceptionally slow as shown by a dusky or congested appearance of the face, the opportunity for absorption will likewise be greater, and the blood will reach the heart overcharged with chloroform, and possibly produce its poisonous effect. A low temperature of the blood of the patient, as in cases of shock, seems to act in the same manner, probably by hastening the condensation of the chloroform vapor in the pulmonary tissues and favoring its absorption into the blood.

A combination of these conditions therefore should put the anæsthetizer, especially one who employs chloroform, on his guard. And, during the preliminary stages of chloroformization, at least, it may be said that a

patient who is shocked by injury or accident, who is only partially anæsthetized, whose face is dusky or congested, whose breathing is quick, and who is struggling against the anæsthetic, is in the greatest danger. Many deaths have occurred from chloroform under these circumstances and in this first, or so-called stage of excitement. The second stage is the period of true anæsthesia, during which consciousness and sensibility are abolished, the muscles relaxed, the pulse weak, the breathing often shallow and feeble; it is during this stage that operations should be performed and great care observed to limit the quantity of chloroform used to the least amount necessary to continue the condition without causing it to pass into the third stage, or that of narcosis in which there is increasing weakness of the pulse, stertorous breathing, complete abolition of the reflexes and other indications of profound involvement of the nerve centres. This is still more dangerous than either of the other stages. There may be no premonitory symptoms of danger, or it may be indicated by either great paleness or congestion of the face, or by marked irregularity and failure of the pulse.

It seems probable that the position of the patient during chloroforming has much to do in increasing or diminishing the risks of perspiratory or cardiac failure. It is said that during gynecological and obstetric operations, in which the patients are kept lying on the left side, the pulse and respiration have been more satisfactory during anæsthesia from chloroform than when the patients have taken it in the usual position. A celebrated surgeon is said to have noted the fact that all of his patients who, when in danger of death from chloroform, were rolled upon the left side recovered, while those kept on their backs or placed in other positions not infrequently died. It may be that the view which attributes special safety to the drug in obstetrical cases took its origin in the fact that the customary obstetrical position in England is upon the left side. Dr. Buxton thinks that the influence of position is unquestionably important and is due to the fact that the condition of the heart, lungs, tongue, and larynx is more nearly correct physically and physiologically when a patient is placed in the left lateral position instead of on the back. He mentions as corroborative the circumstance that during sleep and in all conditions in which respiration is shallow and is carried on at a disadvantage, most persons instinctively assume the lateral position. He adds that the difference in the condition of the pulse and respiration of patients chloroformed in the dorsal and lateral positions has been so striking as gradually to force on one the lesson of placing every patient where it is possible on the left side before chloroforming him.

Various apparatuses have been devised for the administration of chloroform, most of them too complicated and expensive for practical use. In my opinion the safest and therefore the best way of giving it is by pouring a few drops at a time upon the surface of a folded towel or napkin and, holding it at first two or three inches from the nose of the patient, gradually lessening the distance as its effects begin to be produced. It should always be given while the patient is in a reclining or recumbent posture, being especially dangerous on account of the tendency of heart failure if it is given to persons in an erect or semi-erect position. During its administration certain indications should put the anæsthetizer immediately upon his guard. These are, in the order of their danger, first, failure of the pulse; second, sudden change in the color of the face, extreme pallor denoting a tendency to syncope while a dusky or purplish face indicates obstructed respiration; third, stridulous breathing; this if very marked may indicate spasm of the glottis either from direct irritation by the chloroform vapor, or from reflex action caused by the operation which may have been begun; or the same breathing may be produced by the falling backward of the tongue and epiglottis, which thus cover more or less completely the aperture of the larynx.

These conditions, while more likely to occur during anæsthesia from chloroform, may also be produced by ether and other anæsthetic agents. The duty of the anæsthetizer should be the same in every case. He should promptly take the following precautions:

1. Remove the anæsthetic and secure a plentiful supply of fresh air about the head and face of the patient.

2. Place the fingers back of the angles of the inferior maxilla and press it strongly forward, thus carrying with it the tongue.

3. Seize the tongue near its tip and draw it forward.

4. Lower the head of the patient or, if the case is a grave one, raise the lower limbs, pelvis, and trunk higher than the head and shoulders.

5. Begin the movements of artificial respiration, catching the arms at the elbows and carrying them outward and upward

until they almost meet in a line above the head, then bringing them down again until they touch the sides of the chest; at each movement moderate pressure should be made upon the lower portion of the sternum These motions should be repeated not oftener than 16 or 18 times per minute. This time honored method of artificial respiration has never been improved upon, and a large quantity of air can be made to pass through the lungs with each of these movements.

6. Dash alternately hot and cold water on the front of the chest.

7. Give hypodermics of strychnia.

8. Rub the extremities strongly toward the heart.

9. Compress the abdominal aorta.

The last two methods are intended to keep the blood in the region of the heart and great nerve centres where, at least during the period of shock, its presence is vitally important.

10. Faradize the diaphragm, placing one pole on the pit of the stomach and the other over the root of the neck.

11. Small lumps of ice, or "ice suppositories," inserted into the rectum, will sometimes by reflex action bring about deep breathing.

12. As soon as swallowing returns use diffusible cardiac stimulants—alcohol, ammonia, and possibly digitalis. The majority of these directions apply also to difficulty arising during the use of ether, which we may now consider.

ETHER.—Ether is the chief anæsthetic employed in practical surgery in this country. It produces when inhaled a succession of conditions very like those described as caused by chloroform, but with important differences.

1. A stage of excitement preceded by a feeling of strangulation or of suffocation, with a burning sensation in the fauces, lachrymation, often more or less coughing, accompanied by excessive secretion of laryngeal and bronchial mucus. In other words, we have during this period of excitement the evidences of the local, irritating action of the ether upon the mucous surfaces with which it comes in contact. The patient may at this time pass into a condition closely resembling natural sleep, often mistaken by inexperienced etherizers for one of true anæsthesia. During this condition the patient can easily be aroused and is sometimes quite conscious of all that is going on about him. Indeed, during the whole of this stage the special senses are often almost preternaturally acute, and a remark made by the surgeon or his assistant will often be responded to promptly and intelligently by the patient.

2. This passes after a variable interval into a period of unconsciousness, at first accompanied by some degree of muscular rigidity, but soon followed by relaxation. The complexion should be unaltered; the pulse is usually increased in force and volume.

3. If the etherization is pushed and a large quantity of the anæsthetic employed a stage characterized by stertor and profound coma follows, the pulse being still strong and full but the face becoming flushed or purplish. This stage should only be occasionally and accidentally reached during etherization, and should be the signal for the temporary withdrawal of the anæsthetic and immediate inspection of the respiratory conditions with careful attention to the mouth and throat and watchfulness to see that the tongue is well forward, and the movements of breathing deep.

It cannot be said that ether is absolutely safe and harmless under all circumstances, as there have been a number of deaths reported from its use or, at least, during its use. In the great majority of these cases the exact responsibility of the anæsthetic itself has never been determined.

In 1861, a committee of the Boston Society for the Improvement of Medical Science reported that after a labored search they had learned of no case which was unquestionably and unavoidably fatal from the breathing of pure sulphuric ether. They considered two conditions essential to placing the responsibility of any case of death upon the anæsthetic: 1. That the event should occur while the patient is actually anæsthetized. 2. That the circumstance of its occurrence should be inexplicable by any phenomena of disease or by the operation. Very few, if any, reported cases comply fully with these conditions.

The deaths recorded by Turnbull and Lyman in their treatises, and by Jacob (*British Med. Journal*), are either uncertain in their relation to etherization, or were caused by asphyxia, or more rarely by syncope.

Druet (*Des Contraindications de l'Anæsthesie*, 1880) and Kappeller (*Deutsche Chirurgie*, 1881) give no new light on sudden deaths occurring during anæsthesia, and accompanied by cessation of respiration. The cases of Hunt, Morton, Levis, Hutchinson, Norris, Sims, Emmet, and others, are all instances of death after anæsthesia,

at periods ranging from two hours to eighteen days, and possibly associated with nephritis.

One reported by Allier and two by Post occurred during operations for tumors of the neck. In connection with these the observation of Schiff should be remembered, that when animals are anæsthetized, pinching the skin of the neck will at once arrest both respiration and the action of the heart.

In several recorded cases, while herniotomy was being performed, the patient vomited and died. Mr. Marcus Gunn has suggested that as the vomiting of acute intestinal obstruction results from a powerful descending impulse of the vagus, and as sudden arrest of the heart's action in diastole is also known to be produced by such an impulse, we may expect to meet with this association of vomiting and sudden heart-failure during as well as before and after anæsthesia. The same result has occurred even more frequently under other anæsthetics.

Warrington Hayward records a death during etherization from the sudden failure of respiration owing to the occurrence of an epileptiform spasm of the respiratory muscles, whereby the chest was fixed in the position of expiration. Nothing was discovered either at the time or at the autopsy, which gave any clew as to how the fatality could have been avoided.

The doctrine of cerebral inhibition advanced by Brown-Séquard should not be overlooked in its application to the few cases of sudden death during etherization in which the autopsies failed to explain the accident. He has shown that there is an arrest or suspension of function in the nerve centres, muscles, and nerves, taking place without demonstrable organic change, and following immediately upon irritation of the nervous system at some point more or less distant from the part in which the effect is observed. He attributes to this cerebral inhibition the cases of sudden death and "death without agony" which are analogous to the loss of intellectual activity that occurs in epilepsy. Such death may be produced in animals by a prick of the ventricle of Arantius in the floor of the fourth ventricle.

But one instance of death during etherization has come under my immediate notice. A middle-aged man, apparently healthy, came to Philadelphia from the northern part of this State to have an operation for the relief of hemorrhoids performed by Dr. Agnew. After the customary preparations, the administration of ether was begun, and progressed until the second stage was reached, muscular rigidity not having entirely disappeared. Sensation having been abolished, however, the operation was begun and one hemorrhoid was ligated, when the patient suddenly ceased to breathe. Every effort was made to bring about natural respiration, but without success. The entire quantity of ether given did not exceed four ounces. The autopsy showed that death had resulted from an apoplexy into the fourth ventricle, a small coagulum being found in that position and resting upon the respiratory centre. The vessels of the circle of Willis were brittle and atheromatous, as were also the vessels of the entire brain. The increased vascular tension produced by the ether was probably the immediate cause of death in this case, but of course the anæsthetic should not be held accountable for the death, as any other condition which would have increased the blood-pressure would have produced the same accident.

Dr. Fritz Feuter has recently published an elaborate article upon ether anæsthetization, recording his experience in a large number of cases. He has always employed a large face mask, around the edges of which a folded towel is laid to prevent evaporation of the drug.

The following four points were separately dealt with, as being of most importance: First, the time from the beginning of anæsthization until anæsthesia is produced. Second, the quantity of ether necessary for this. Third, the total quantity of ether used; and fourth, the duration of the anæsthesia. His method of administration is as follows: From a graduated bottle about 50 Ccm. is poured upon the mask (for an adult, for children half this quantity is sufficient). The mask is then slowly brought down to the face so that the patient gradually becomes accustomed to the fumes; this does away with that painful choking which always occurs if the mask is abruptly placed upon the face. So soon as the mask is well over the face a folded towel is placed around it, and the mask is not removed again until there is complete relaxation of the extremities. In this way the patient is continually inhaling ether fumes, for even his exhalations are partly reinhaled, and assist in producing anæsthesia. With these precautions carefully adhered to, the author has invariably found that complete anæsthesia could be induced within two minutes. More than this, the amount of ether subsequently required to maintain unconscious-

ness is remarkably small. Often in operations of over a half hour's duration, and even longer, no addition of ether was necessary.

In his opinion the two most important points upon which the success of etherization depends are the concentration of the fumes and the non-removal of the mask. The nausea following etherization he believes to be due to the swallowing of saliva which is filled with ether, the secretion being greatly increased by the drug; naturally, therefore, the less ether used the greater probability that nausea will not be produced; and indeed his experiments seem to justify this conclusion, for in one hundred and fifty cases vomiting only occurred in ten, and in two of these the patients had taken a meal immediately before the operation. In quoting the statistics of other clinics, he states that out of five hundred and fifty-three cases vomiting occurred in one hundred and forty-eight. Feuter continues by giving a list of personal observations which differ but slightly from those of other practitioners. One fact, however, deserves special notice, viz., he has observed in several cases that when the patient had taken a moderate quantity of alcohol just previous to the operation that the anæsthetization was greatly accelerated; indeed, in one instance hardly a minute passed before the patient was in a complete stupor. Emmet was the first to point out the danger of etherizing patients affected with nephritic troubles. He claims that it is absolutely necessary to examine carefully the urine of such patients before operating, and holds that the presence of albumin is a positive contra-indication for the use of ether, and direct indication for the use of chloroform. Other authorities are of the same opinion. In direct contradiction of the above statements, Feuter declares that he has frequently etherized patients with albuminuria without dangerous symptoms resulting.

Dr. Robert Lovett has reported lately some careful observations in a series of sixty consecutive cases at the Boston City Hospital. He used two methods; one, which he calls the gentle method, in which the ether was given slowly and cautiously; the other the "forcible" method, in which the cone was at once applied closely to the nostrils and mouth of the patient. The former method required an average time of 9.3 minutes and an average amount of 2 5 ounces for complete anæsthesia. The latter only required 4.4 minutes and 1.5 ounces, but the choking sensation was very much aggravated and the patients were very apt to react and struggle violently if they got only a breath of air.

I may say that this experience about corresponds with that of Dr. Agnew and myself in the use of a rapid method by which the ether contained in a bottle was dropped into a bucket of hot water by the bedside of the patient, the vapor being conveyed by a long flexible tube to a mask placed tightly over the mouth and nose of the patient. Our average time for producing insensibility in some dozens of cases was considerably less than a minute—about 43 seconds, and was often within a half-minute; but the condition was rather one of asphyxia than of true anæsthesia; the distress of the patients was very great, and the evidences of excessive increase of vascular tension were so unmistakable and sometimes so alarming that after a fair trial we gave up the method, believing that no economy of time or of ether would compensate for the slightest increased risk to the patient.

On the whole, it may be said that there is no perfectly satisfactory evidence that ether *per se* ever kills, and although it undoubtedly may do so by producing asphyxia, in the vast majority of cases it will do this so slowly and give such marked evidence of its threatening action that every opportunity will be afforded the etherizer to avoid or prevent it.

There is hardly a case in which ether can not be given with safety, but there are certain classes of cases in which there is special danger. These are: 1. Very old people with emphysema, fatty heart, hypertrophy or valvular disease of the heart. 2. Persons with marked tendency to weak heart action or syncope. 3. Persons with extensive lung disease, or with lungs greatly tied down by old pleuritic adhesions. 4. Habitual drunkards. 5. Persons who as the result of alcohol, syphilis, gout, rheumatism, or old age have marked evidences of extensive atheromatous disease.

In the presence of any of these conditions ether should be given very slowly with a large admixture of atmospheric air, and with great attention to the pulse, complexion, and the movements of breathing. The following rules, many of them almost self-evident but all of them important, apply to the preparation of a patient not only for etherization but for the administration of any anæsthetic.

1. The stomach should be empty. No hearty meal should have been taken for at least six or eight hours before the operation.

It is a good rule to insist that all nourishment taken on that day shall be liquid or nearly so, and in many cases it is well to limit the patient to a glass of milk taken early in the morning. This precaution lessens the risk of solid morsels of food being drawn into the air passages during vomiting; makes vomiting less frequent and severe; and diminishes subsequent nausea. In addition, it may be said that the presence of any large quantity of food in the stomach may embarrass respiration by interfering with the action of the diaphragm.

2. Loosen all garments that could in any way impede the movements of respiration or those, such as tight collars or neckbands, which could obstruct the flow of blood through the great vessels of the neck.

3. Remove false teeth or plates from the mouth. Never neglect to inquire as to their presence, no matter what may be the apparent age of the patient.

4. Keep the room at a temperature of at least 68° F. or 70° F., or if the operation is to be a prolonged one at 72°. Practically this is an excellent rule because patients often take cold by exposure during etherization. There is also an additional theoretical basis for it in the fact that when the blood and pulmonary tissues become saturated with ether, evaporation takes place from the surface of these tissues, causing a rapid loss of heat. If the air inspired is warm this supplies the heat necessary to volatilize the ether; if the air is cool the heat of volatilization is taken from the surrounding tissues, quickly chilling them, producing violent contraction of the capillaries, prolonged stasis, engorgement of the right side of the heart, and asphyxia.

5. Have the room perfectly quiet. The preliminary stage of etherization is, as has been said, one of acute sensitiveness to external impressions, and may be greatly prolonged by noise, bustle or excitement in the room.

6. Always examine the heart and lungs, and if the operation is to be severe or prolonged, examine the urine previously.

7. See that no light or flame is near the ether, especially on a lower level.

8. Quietly tell the patient in advance what to expect. Explain the suffocative feeling, mention that it is of almost invariable occurrence and is of no importance; describe the proper method of breathing through both the mouth and nostrils; caution the patient against struggling and resisting. Do this quietly and gently, and it is astonishing how often it will secure such intelligent co-operation on the part of the patient as will make the etherization rapid and easy.

9. Have an assistant ready to render whatever aid may be required, and, if inexperienced, caution him against the use of unnecessary force.

10. Of the various apparatuses employed for the purpose but two need be considered. One of these, that devised by Dr. Allis of this city, consists of a wire frame work, large enough to cover the lower part of the face and through which a strip of bandage has been passed to and fro so that numerous folds are exposed to the wetting action of the anæsthetic. These large evaporating surfaces, the thorough admixture of air, and the economy of ether are the three most definite advantages of this excellent little apparatus. An ordinary towel if folded into a cone, an aperture being left at the apex large enough to insert a finger, answers every purpose in private practice and obviates the necessity for carrying the more cumbrous inhaler.

11. The etherizer should watch three things —the breathing, the complexion, the pulse. When the breathing is regular and full without snoring, there can be little if any danger; if it is shallow and interrupted, watchfulness should be redoubled and a plentiful admixture of air given with the ether. If it ceases, the anæsthetic should be instantly removed and the tongue drawn forward; if respiratory movements do not begin, artificial respiration should be employed. If the face is very pale and the skin cool, the head should be lowered; if the complexion is livid or purplish, the head should be raised slightly, a freer supply of air given and the tongue and lower jaw brought forward. In case of failure of the pulse the head should be rapidly lowered, the ether immediately withdrawn, and hypodermics of whiskey and digitalis administered. Occasionally in patients who have been etherized after having eaten heartily, a condition may be noticed which includes to all appearances several of these elements of danger, but which is precedent to the act of vomiting; the breathing becomes irregular and interrupted, the face cold and pallid, the pulse almost indistinguishable. In the vast majority of cases this is followed by an expulsion of the contents of the stomach and then by the disappearance of these alarming symptoms. It should not be forgotten, however, that in exceptional cases death may occur during vomiting, possibly, as has been mentioned above, from the

descending excitation of the pneumogastric arresting the heart's action in diastole. This affords an additional reason for forbidding the taking of food for some hours previous to the administration of an anæsthetic.

A recent suggestion of Dr. Benjamin Howard, as to the cause of death in certain hitherto unexplained cases of fatality during anæsthesia, seems to me worthy of the most careful consideration. His views are founded upon his own observations and upon those of Dr. R. L. Bowles, made many years ago in conjunction with Drs. Fox, Hunter and Marshall Hall. Dr. Bowles claims precedence, I believe, for his work, but agrees in the main with Dr. Howard's views, which are as follows: A certain number of cases of apnœa and death are due to falling backward of the epiglottis, a condition often unrecognized, and almost surely fatal if unrelieved. There are many reasons for believing that traction on the tongue or pushing the jaw forward, while of the utmost value when the tongue itself is the obstructing body, do not affect the position of the epiglottis in these exceptional but equally dangerous cases:

Traction on the tongue is ineffectual because:

a. The tractile force supposed to be exercised upon the epiglottis is arrested chiefly by the frænum linguæ, and through the muscular fibres within it is expended upon the inferior maxilla into the genial tubercles of which they are inserted.

b. The surviving force is expended almost entirely upon, and intercepted by, the anterior pillars of the fauces.

c. For any tractile force which may survive, a continuous and sufficient medium for its transmission to the epiglottis is wanting.

Extension of the head and neck is the only sure means of causing instant and complete elevation of the epiglottis, because: by a three-linked chain, in which the hyo-epiglottic ligament is the lower link, the body of the hyoid bone the central link, and the combined genio- and mylo-hyoidei muscles the upper link, the epiglottis is so connected to the body of the inferior maxilla, that above a certain point, as the body of the lower jaw is moved upward, the epiglottis instantly, irresistibly, and inevitably moves upward exactly in unison till it is erect. The violent wrenching asunder of the clenched teeth, in proportion as it depresses the body of the inferior maxilla. antagonizes a distinct effort of Nature to maintain the elevation of the epiglottis.

Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, with one hand under the chin and the other on the vertex, steadily but firmly carry the head backward and downward. The neck will share the motion, which must be continued until the utmost possible extension of both head and neck is obtained. Assuming the mouth to be shut and the inferior border of the inferior maxilla to be at a right angle with the cervical column, as in the average recumbent posture, the head must be continued to be extended from thirty to thirty-five degrees more before it is possible for the epiglottis to be affected at all. Not until after the skin from the symphysis to the sternum is quite tense do the relaxed muscles in question beneath it become tense at all. These being tense, from this point the elevation of the epiglottis begins.

In a nut-shell: Make the line of skin from the chin to the sternum as straight as it can be made, and the complete elevation of the epiglottis is assured.

By extension of the head and neck carried to the utmost, the remaining obstructions from the backward-fallen tongue, the velum palati, and uvula, are also simultaneously removed, and the entire pharynx is enlarged throughout. Because: *a.* The tongue, the dorsum of which before fell by gravitation upon the then horizontal posterior wall of the pharynx, falls upon the now horizontal arch of the palate. *b.* The velum palati, by means of the great tension of the palato-pharyngei muscles, is pulled away from the posterior wall of the pharynx, the entire membrane being stretched tightly forward and downward, behind part of the dorsum of the tongue, helping to complete the shutting of the tongue out of the pharynx and into the mouth, and together with its dorsum forming a partition—the anterior wall of a new air-way, thus created and maintained. *c.* The pharynx, anteriorly, from the base of the tongue to the cricoid cartilage, is stretched strongly forward by the extreme tension of the sterno-thyroidei muscles.

Dr. Howard summarizes his interesting paper as follows:

1. Contrary to universal belief, traction of the tongue cannot raise the epiglottis. 2. By sufficient extension of the head and neck, whether by volition, instinct, reflex action, or by the effort of another, whether in the healthy, the dying, or the dead, the epiglottis is instantly, and beyond preven-

tion, made completely erect. 3. By complete extension of the head and neck the tongue and velum are as respiratory obstructions, simultaneously with the epiglottis, removed; and without a moment's delay the entire air-way can be straightened, enlarged, and be made free throughout by the nearest person. 4. If syncope happens to be the chief factor, or only incidental, this also gets thus the quickest and best corrective.

He expresses the hope and confident belief, that the facts above submitted will be found to be permanent additions to our means of averting death.

In the *British Medical Journal*, Jan. 26, 1889, Mr. Frederic Hewitt calls attention, one, to the occasional impossibility of adopting Howard's suggestion, on account of tonic spasm of the muscles of the neck, jaws, etc.; and two, to the danger of trusting to a post oral (or nasal) air-way which might so readily be occluded by tumefaction of the mucous membrane, by mucus, or by morbid conditions. Drs. Martin and Hare, in the *Medical News*, March 2, 1889, reaffirm this latter statement, recommend moderate instead of forced extension of the head and neck, so that space may be left between the tongue and palate to permit of breathing through the mouth, and the simultaneous pushing forward of the hyoid bone and the lower jaw. If obstruction to breathing still persists, the tongue should be at once drawn or pushed forward by force exerted upon its dorsum posterior to the anterior half arches of the palate. The subject is an extremely interesting one, and will bear further investigation; but it would seem now to be fairly well established that in the main Dr. Howard's conclusions are justified, and that his method in the majority of cases and in the absence of nasal obstruction is at once the simplest and the most efficient.

12. The etherizer should attend strictly to the anæsthetic, and unless of long experience and perfect self-possession, to nothing else.

13. Etherization is complete when the arm raised from the side drops helplessly, and when the orbicularis palpebrarum fails to respond when the conjunctiva is touched.

14. After this time the ether should be given in small quantities and with plenty of air.

15. With the completion of the operation the responsibility of the etherizer does not end, although it is not uncommon to see him walk away from the operating table or bedside to inspect a tumor or look at a wound, or aid in washing and cleaning instruments. He should only leave the patient when his place can be taken by a trained and experienced nurse, and should even then for some little time be within call in case of emergency. The vomiting which frequently follows etherization is itself distinctly dangerous if any food has been taken. The patient, incapable of intelligent movement, can readily perish from asphyxia caused by the inspiration of solid portions of the ejecta, and should be carefully watched with this possibility in mind. Then, too, during the intoxication and excitement, which often constitute a distinct stage preliminary to a return of consciousness, he will require careful supervision to prevent him from doing himself harm.

The pain or smarting of the wound will at once draw his attention in that direction and he is very apt to attempt to remove the dressings. The records of surgery show many distressing cases in which this has occurred. One of them, which always seemed to me to be peculiarly horrible, is that of a patient who, being left alone immediately after an operation for strangulated hernia, tore off his bandages, opened the wound and actually pulled out yards of his own intestines.

METHYLENE.—With this anæsthetic we have had but little experience in this country and I believe that has not been very favorable. It was introduced to the profession twenty years ago by Dr. Richardson, of London, who, after a long series of experiments, concluded that its action was more rapid than that of chloroform and that it produced a more prolonged and profound narcotism, but rapidly escaped from the system, and was accompanied by an equally rapid return of consciousness. Deaths have been recorded from its use both here and abroad, as well as from the use of the methylene ether, a mixture of methylene dichloride and absolute ether, also introduced by Dr. Richardson. I have recently seen this anæsthetic administered by Dr. Day, one of the physicians to the Samaritan Hospital in London, who has given it in between 1200 and 1300 cases without difficulty of any kind. He has reported the interesting fact that twelve drachms is the largest quantity he has ever administered in an operation lasting one hour. This agrees with curious accuracy with the statement made by Dr. Richardson as long ago as 1867, when he reported the quantity used in surgical operations as averaging about one drachm every five minutes. In the case which I saw there was

no apparent period of excitement, the patient coming rapidly under the influence of the anæsthetic and almost as rapidly recovering consciousness. Dr. Day watches particularly the color of the face and the character of the respiration, paying little or no attention to the pulse; although experiments on the lower animals seem to show that when methylene kills it does so by paralyzing equally the circulation and respiration. I have had absolutely no personal experience with this anæsthetic, but am disposed to reject it as somewhat more dangerous than ether, and without sufficient advantages to counterbalance the increased risk.

NITROUS OXIDE.—This is made by heating nitrate of ammonium in a retort until it decomposes into watery vapor and the so-called laughing gas. The latter collected in a rubber bag or other proper receiver may then be administered as an anæsthetic by inhalation. It would seem from chemical considerations, nitrous oxide being a stable compound at the temperature of the body, and from experimental observation, dogs dying in it in precisely the same time as when put in nitrogen, that nitrous oxide acts by producing asphyxia, or at least by preventing oxidation of the blood. There is, however, no doubt, a primary effect of specific stimulation of the nerve centres as shown by a period of exhilaration, from which it derives its familiar name. There are a few reported cases of death during, or after the inhalation of nitrous oxide, but, not more than three, I believe, and even these are more or less doubtful. In one of them there was found extensive fatty degeneration of the heart; in another no autopsy was made; and in the third only two inhalations of the gas had been taken when the patient died after the extraction of teeth, probably from syncope produced by nervous shock. In this city at the rooms of certain dental operators enormous numbers of persons (nearly one hundred and forty thousand) have taken the gas without a single death.

The stages produced by this anæsthetic are two: 1. Exhilaration, or the development of the peculiar mental excitement, which is usually cheerful and often boisterously so. 2. Unconsciousness, lasting from two to four minutes, during a portion of which time there is a period of muscular relaxation which is, however, never so complete as under the other anæsthetics. The most common danger associated with the administration of this gas is that arising from a spasm of the muscles leading from the base of the tongue to the hyoid bone and pharynx, producing a condition known as "swallowing the tongue." This sometimes occurs with great suddenness and if unrelieved threatens death from asphyxia. The tongue should of course be immediately drawn forward by forceps and held there until the spasm disappears or the patient recovers consciousness. In cases of extensive heart disease the danger of fatal syncope should be borne in mind, and similarly the risk of asphyxia should be remembered in cases with grave pulmonary troubles. On the whole, however, nitrous oxide may fairly be said to be the safest of all known anæsthetics within the limitation of its present use, which is chiefly in the performance of such trifling operations as the opening of boils, abscesses or felons, the removal of small epitheliomata, the division of fissures of the anus, or the extraction of teeth.

In *résumé* I may formulate the following conclusions:

1. As a rule ether, as the safest of the more powerful anæsthetics, is to be preferred; the lessened risk to life more than counterbalances its minor disadvantages.

2. Chloroform may be employed when ether has failed, or cannot be procured, or when there is a distinct record of serious trouble during a previous etherization. It is possibly safer in children than in adults, and it is said to be exceptionally adapted for administration in obstetrical cases. It has some distinct advantages over ether in cases of stenosis of the larynx or trachea, and may be considered in those cases of emergency in which an operation has to be performed a short time after a solid meal.

As secondary indications for its employment the following may be mentioned:

a. Protracted operations about the mouth, jaws, nose, or pharynx which necessitate the mouth and nose being uncovered.

b. Operations needing the employment of the actual cautery, in the vicinity of the mouth.

c. Severe bronchitis, emphysema, or asthma.

d. Extensive renal disease.

e. Marked atheroma.

3. Nitrous oxide should be employed in operations which can be completed in from two to five minutes.

4. Methylene, methylene ether, and the various anæsthetic mixtures, such as that of alcohol, chloroform and ether, are not so safe as ether alone, and have no decided advantages to compensate for the increased risk.

COMMUNICATIONS.

PRACTICAL ASEPTIC SURGERY.[1]

BY J. W. LONG, M.D.,
RANDLEMAN, N. C.

(*Concluded from p.* 261.)

Having discussed the various prerequisites of modern surgery, and the object of this paper being purely practical, I will now ask you kindly to examine these bags, which you will find contain every thing that aseptic surgery really demands. Take the smaller bag first. You will observe that it is only an ordinary leather satchel, about twelve inches long; that it is carried by the handle or a strap thrown across the shoulder. On opening it, we find a leather strap sewed in loops along the sides, and containing the following articles, to wit: Gerster's iodoform box; a two-ounce bottle of chloroform, with a notched stopper tied to the neck; a two-ounce bottle containing the corrosive sublimate mixture; two ounces of carbolic acid; a half-ounce of Churchill's tincture of iodine—the iodine and acid bottles have a bit of cotton about the mouth and are wrapped in protective; a half-ounce of four per cent. solution of cocaine, and a small pipette; hypodermic syringe, tablets of morphine, and a small exploring-needle; a stiff nail-brush; litmus paper; and two ounces of glycerine, with twine tied around the neck of the bottle for making vaginal tampons. A plain sack or cover made of rubber sheeting about 6 by 8 inches holds one or two ample pieces of protective, a yard or more of corrosive sublimate gauze, and a large piece of borated cotton. In the bottom of the bag is a narrow Esmarch and several cotton bandages. There is also a plain cloth case containing such instruments as one may wish to carry. A little side-pocket holds needles, silk, pins, and safety-pins, the former two wrapped in protective.

This arrangement of the various articles enumerated is very simple and convenient; besides, it leaves the body of the bag for extra instruments, an unusual amount of dressing, or anything else. This bag soon paid for itself over and over again. Now I could not get along without it. With it any minor operation may be done after the style of modern aseptic surgery. I will give some examples by way of illustration.

[1] An address delivered before the Southern Surgical and Gynæcological Association, Dec. 4, 1888.

Case I.—March 1, Mrs. ——, while picking up clothes for the wash, ran a needle deeply into the upper part of the palm of the right hand. It gave her great pain. Her husband immediately telephoned for me, and the operation was conducted as follows: Pulling off my coat and rolling my sleeves above the elbow, I first thoroughly washed my hands and arms in hot water and soap; then I washed the patient's hand and wrist. Next, the instruments needed were laid in a small dish containing a three per cent. solution of carbolic acid—an ordinary goblet will answer every purpose for holding the small instruments necessary in such operations, and two fluid drachms of acid solution to a goblet of water approximates a three per cent. solution. Twenty minims of a four per cent. solution of cocaine were injected into the proposed line of incision. While the cocaine was being absorbed, my hands and the patient's hand and wrist were washed in a 1 to 1000 solution of corrosive sublimate. The application of a rubber bandage rendered the hand and wrist bloodless. A short deep incision was made directly over point of entrance of the needle. The bloodless condition of the parts enabled me to see the needle passing upward and backward beneath the annular ligament, and it was easily extracted. The wound was washed in the sublimate solution, iodoform freely dusted over it, sublimate gauze applied, and snugly held in place by a roller bandage; after which the rubber bandage was removed. The entire operation was painless and bloodless. In a few days, the dressing was removed—the wound had healed by first intention, without a drop of pus. Some one may say that extracting a needle is a trivial matter and not worthy the consideration of this society; but do you think that any one who can not extract a needle aseptically should be trusted to do a laparotomy or a herniotomy?

Case II.—Geo. A., about thirty years old, white, had a tumor the size of a marble on the inner side of the left ring-finger. It had been growing four years, since the finger had been hurt in a scuffle. The preparation of hands, patient, and instruments was as in the first case. Cocaine and the bandage were used. A longitudinal incision displayed a dark looking mass, having the appearance of malignancy. The tumor extended through the lower end of the first phalanx and seemed to spring from the medullary canal; the bone had evidently been fractured in the scuffle four years ago. The mass was torn and trimmed out with

forceps and scissors, leaving a healthy looking cavity. This was packed with iodoform gauze, and the whole finger thickly covered with sublimate gauze and absorbent cotton, held in place by a roller bandage. The wound rapidly filled up by granulations, the dressing being changed as often as it became soiled.

Now, kindly notice this larger bag, which is specially gotten up for major operations. It is a leather satchel about 17 inches long, with a stout handle. On the outside are strapped a nest of four oblong tin pans, the inner one holding Dr. Kelly's surgical pad and a piece of rubber sheeting, three by four feet. On opening the satchel you will observe that the partition has a side pocket containing two ample pieces of protective, and several envelopes holding respectively, silver wire, pins and safety pins, silk and needles wrapped in protective; and another containing several powders for making Theirsch's solution. The other side of the partition presents loops for the following articles: razor, shaving brush, nail brush, test tubes, bottle (in tin case) of bone drains, a four ounce bottle (in tin case) of carbolic acid, a two ounce bottle (also in tin case) of Churchill's tincture of iodine, a four ounce bottle of whiskey, bottle of catgut in oil of juniper, a bottle of corrosive sublimate tablets, and a box of iodoform ointment. The body of the bag contains in one side a case (five yards) of corrosive sublimate gauze, an ordinary rubber syringe, a fruit jar holding sponges and rubber drainage tubes in a five per cent. solution of carbolic acid; a four ounce bottle of Squibb's best chloroform protected by a box of wedge-wood; three shallow tin basins; two or three pie pans; two quarter-pound cans of ether; a wide rubber bandage; a cake of soap; and a number of cotton bandages. A fountain syringe to be used as an irrigator is rolled up and placed in the pans. On this side is also a chloroform inhaler, which is simply a wire muzzle covered with coarse cloth. These articles are covered by two or three towels (take plenty of towels with you) all held in place by two transverse straps. The other side of the bag holds a half-pound or more of absorbent cotton rolled in a clean towel. Also an ether inhaler, which is a plain lamp chimney with a soft rubber face-piece. Both inhalers and the fountain syringe are kept in bags of rubber sheeting, as they are apt to get soiled and contaminate other articles in the bag. This leaves a large space for instruments, which are selected for each operation and placed in a cloth case or wrapped in a clean towel and stowed away in the bag just beneath the roll of cotton, which keeps them from jostling about and becoming injured. Some extra towels are in this side also.

Of course the arrangement in the bag of the various articles enumerated is entirely arbitrary and must be made to suit the convenience of each operator. The large bag contains no iodoform, cocaine, hypodermic or exploring needle, and no bandage or scissors, as they are all carried in the small bag; but might easily be added to the large bag.

Case III.—On Feb. 14 I was called by Dr. S. Redding to remove a tumor the size of a large orange from the hepatic region of Miss Hinshaw, white, about 26 years old. The tumor had a history of ten years' duration, and recently had begun to suppurate at its most prominent point. It was causing the patient and family a great deal of uneasiness. We proceeded as follows: A dining-table was covered by a thick quilt and oil-cloth. Upon a small table near by several of the pans shown in the large bag were placed and filled, one with five per cent. carbolic solution for instruments, one with 1 to 1000 sublimate solution for sponges, and two with clear water, one being to drop instruments in as they became bloody, and the other for washing soiled sponges in before being returned to the sublimate solution. A strong sublimate solution coagulates the blood in a sponge and makes it hard to clean; besides the solution soon becomes turbid with blood. Therefore, during an operation, the sponges should be washed first in a vessel containing plain water and then replaced in the sublimate solution before being handed to the operator. An observance of these precautions in regard to the sponges and instruments will prevent confusion and add much to the orderly management of an operation. Another pan contained needles in a three per cent. carbolic solution ready threaded with silk, while another held the dressing—sublimate gauze, iodoform gauze, absorbent cotton, and roller-bandages. The iodoform pepper-box was near; a hypodermic syringe charged with whiskey, and a glass of whiskey were also convenient. Our hands and arms having already been scrubbed in hot water and soap, I proceeded to wash the field of operation, while Dr. Rudding administered ether. After using soap and water on and around the tumor, the parts were sponged with a sublimate solution, 1 to 1000, after which towels soaked in a

similar solution were arranged around the parts to be operated on. A small tub had been placed under the edge of the table to catch the water and blood during the operation, and a large pitcher was filled with 1 to 2000 sublimate solution for irrigation. Every thing being in order, my hands were placed for one minute in a 1 to 1000 sublimate solution, and a bowl of the same placed near by on a chair in which to dip the hands during the operation. The tumor was surrounded by two long elliptical incisions, and rapidly enucleated. Quite a quantity of blood was lost owing to the fact that the tumor, while of a fatty nature, was channeled in every direction with sinuses filled with blood. After the enucleation one or two spurting arteries were tied with very fine silk, the wound irrigated thoroughly from the pitcher, and the sides approximated with numerous silk sutures. The parts then presented a simple straight line of incision about eight inches long. No drainage was employed except a strand or two of silk carried beneath the sutures and projecting from either angle of the wound. While the patient's shoulders were gently raised her back was cleansed of blood and water. Iodoform was freely dusted over the parts, iodoform gauze laid along the line of the incision, sublimate gauze and absorbent cotton thickly applied over this; the dressings were held in place by a wide roller bandage. At the end of two weeks the dressing was removed and the wound found healed throughout, except about an inch in the middle where the sutures had cut out—a retentive suture should have been used. The parts were sweet and healthy, and in a few days were entirely healed.

The dressing employed in this case is a typical example of the dry dressing, and the results of the case—no suppuration and no fever—show what may be expected from aseptic surgery. Below I append a case illustrating the moist dressing.

Case IV.—Dr. W. A. Woollen asked me to see the following case, occurring in his practice. Sam S., black, 7 years old. The patient gave a history of acute inflammation of the right tibia, which commenced last November. Some time before I saw the patient his leg had been lanced for the escape of matter by Dr. Stanton. The left femur was enlarged and tender, but no sinus existed from it. The affected tibia was discharging freely from three or four sinuses, the probe readily detected dead bone. May 2, with the kind assistance of Drs. Woollen, Fox and Walker the following operation was done. The room having been previously scoured—floor, walls and ceiling—and all unnecessary furniture removed, a dining table and a small one were prepared as in Case III; a bed was also prepared. A quantity of boiled water and a number of towels and bowls were provided. The hands of operator and assistants were washed as heretofore described, our coats being first removed and a clean apron pinned around the waist of each. The instruments and dressings and solutions with basins of clear water were arranged as usual. A fountain syringe was filled with 1 to 2000 sublimate solution and suspended from a nail near the ceiling. The edges of oil cloth covering the table were doubled so that the bloody water would be carried to a tub under the edge of the table. The little patient having had a general bath early in the morning was laid on the table and anæsthetized. His leg was thoroughly scrubbed with soap and water, followed by the sublimate solution, 1 to 1000. The limb was elevated to the perpendicular for five minutes to allow the surplus (?) blood to gravitate into the body. It was then surrounded by a sublimate towel and an Esmarch bandage applied from the toes to near the hip; the lower end of the bandage being unwound, the ends were tied in a bow-knot above the knee. This rendered the limb bloodless and should never be omitted in operations upon the extremities, unless positively contraindicated. The operator's hands were again dipped in the sublimate solution and the leg douched from the irrigator. An incision through all the tissues down to the bone and extending from one sinus to another displayed abundant dead bone, pus, and detritus. Thinking to chisel and scoop out the diseased parts and leave a trough of healthy bone, we proceeded cautiously with chisel and gouge. But the further we went the more dead bone we found; finally we discovered that the tibia was honey-combed with dead tissue from joint to joint. This left us with only two alternatives—amputation or exsection of the bone in its entirety. The latter plan was quickly decided upon, in the hopes of giving the little fellow a tolerable limb. The periosteum was easily stripped from the bone and the lower end of the bone broken loose from its attachments, a triangular piece of the lower end adhered to the cartilage and was broken off. In trying to remove this the ankle joint was inadvertently opened, and it was thought best to remove the tibial cartilage in order to insure better drainage.

The upper end of the tibia was loosened from its cartilaginous covering by means of a sharp chisel, and the remnants of bone scraped away with Volkmann's scoop; the knee joint was left intact except an insignificant nick in the synovial sac. During this time a stream from the irrigator had been playing upon the parts every few minutes. The wound, which was very extensive, being again thoroughly irrigated, was snugly packed with iodoform gauze freshly wet in corrosive sublimate solution, 1 to 1000. Over this successive layers of sublimate gauze were laid in an orderly manner, and wet throughout from the irrigator. The entire limb was now enveloped in a thick layer of borated cotton, and this in turn covered by protective extending from the perineum to the tips of the toes. A roller bandage applied rather tightly held the dressing in place and controlled hemorrhage by pressure. Splints were adjusted to insure immobility of the joints and to keep the parts at rest. The last thing was to remove the rubber bandage and see that the blood returned to the toes.

In spite of this terrible operation—compared with which amputation of the parts would have been a comparatively small matter—this child's temperature never reached 102°. His appetite improved and he began gaining flesh almost from the day of the operation. On the ninth day the parts were dressed, using the same precautions as to hands, dressing material, irrigation, etc., as in the operation itself. A little chloroform was given. The wound was found fresh and sweet and rapidly filling up with healthy granulations—"new inflammatory formation" of Billroth. The limb has been dressed once a week since and is now entirely healed, except a short, wide hole at the ankle and the knee.

I show you the tibia removed from my little patient. This case strongly illustrates the triumphs of aseptic surgery. Where is the surgeon who would undertake to save a limb under just such circumstances—after the old ways of surgery?

It may be objected that this paper contains little that is new or original. My answer is, that I do not come with untried theories and impracticable suggestions, but only with those methods proven by actual experience—the only crucible in which the dross is consumed and the gold purified.

—The chemical and pharmaceutical laboratory of the Ohio State University was destroyed by fire Feb. 12.

THE INFLUENCE OF SEXUALISM IN REFLEX OCULAR NEUROSES.

BY GEORGE M. GOULD, M.D.,
PHILADELPHIA.

It has been a matter of frequent observation with me that, prior to the age of puberty, the young, as the result of eye-strain, are troubled a great deal with conjunctival and blepharal congestions and inflammations, and much more than after puberty; that boys, both before and a longer time thereafter, are troubled in this way somewhat more than girls; that girls and women, after puberty, are far more prone to have headaches and neuroses than boys and men. However frequent the exceptions I think the rule is that, with irritational eye-strain, the male sex is more apt to show ocular evidences of the same than the female, that both have these ocular symptoms more before than after puberty, and that after this period girls and women have far more headaches than men. It is a matter of not uncommon observation that vernal conjunctivitis, to which young girls are peculiarly subject is almost incurable, but that it disappears, as if spontaneously, at the age of 13 or 14. Styes are frequently seen in young girls and boys but seldom in young ladies and men. Many other palpebral or conjunctival derangements have been noticed to follow this law. A practitioner of great experience and fine observation, Dr. O. P. Rex, of Philadelphia, tells me he has noted very many such facts in his practice.

I do not at all deny that it is possible to explain certain of these cases as due to some inherited dyscrasia that is conquered by the growth, or whose poison is eliminated by the development of the organism and the power of yet stronger inherited tendencies coming into their destined inheritance of the organism. It may also be said that men often avoid the natural consequences of eye-strain by change of occupation and by freedom from the sewing and the house-life that in women necessitates work at short range. Many other explanations might be found that would satisfy an easy-going logic, but I believe the facts are too numerous and the law too general to be satisfied with such a solution. There must be a more profound law running beneath that will bring the facts into a better consonance with evolution and life.

No student of Wallace and Darwin and the facts of the evolution of form and

beauty both in the animal and the human race, can fail to have been struck with the preponderant influence of sexualism (with its ideals of beauty) upon the life and appearance of all animals and men. To that unconquerable instinct everything, except perpetuation of the species itself, is unhesitatingly and ceaselessly sacrificed. And this is not a whit less true to-day of the social animal, the young man and woman of whatever land or language. My present thesis is therefore this: 1. The natural result of an irritational eye-strain is (in harmony with the physiological law of a return of the reflex to or near the organs primarily irritated) to induce inflammations of the conjunctiva, lids, etc., with the necessarily consequent congestion and despoiling of the beauty of the eyes. 2. To the flowering sexual being, this of all things is most detestable, and all the arts of conscious and unconscious life conspire to prevent it. 3. The methods by which these things are prevented are either (*a*) by means of an inhibition of the return of the eye-strain reflexes to the eyes; or (*b*) by deflecting and derouting the reflex discharges to other organs. In the first case, by withholding, storing and diffusing in the mass of the cerebral centres the incoming irritational stimuli, there is produced the great modern female complaint, headache. In the second case, when inhibition becomes no longer possible, and where, through weak ganglia and irregular associate fibres, the overflow spends itself upon innocent organs, we find the great family of reflex neuroses. It is a matter of great regret that peripheral irritations as a cause of headache are too often ignored, and that reflex neuroses are too often considered as idiopathic affections of the complaining organ.

I have elsewhere tried to emphasize, what is, indeed, sufficiently patent and well-known, that the law of all physiological function is that peripheral stimulus of whatever kind normally results in a reflex or return discharge, motor, vaso-motor, secretory, trophic, etc., to the point, or so as to correspond to, or answer, the peculiarity of the stimulus. Pathology begins when the return discharge is not correspondent to the stimulus. If, by disease of the ganglia, or because of irregularity of commissural fibres, the return discharge is sent by wrong centrifugal routes to innocent organs, we find resulting irritational choreas and reflex neuroses of all kinds. If such reflexes and *débordements* are inhibited, more serious cerebral and mental mischief may result. There are good grounds for believing that headache is often but the first stage or symptom of a hierarchy of functional derangements due to retention and overflow of persisting uncured peripheral irritations. When inhibition begets such tension that *débordement* must take place, it may occur by single or several outlets (choreas, irritabilities, gastric neuroses, etc.); or the discharge may be explosive and general (epilepsies, spasms, etc.); or, again, the outflow may exhaust itself upon intellectual centres and result in monomanias and insanities. It is a good rule of social life and minor morals that a man should, so to speak, burn up his own smoke (extinguish within himself his own personal faults of temper, etc.) without offending his neighbor's nostrils therewith. It would certainly be a great desideratum if the physical brain had the power of neutralizing and consuming those irritational stimuli whose sources it cannot quench. But it seems to have only a limited power of this kind, and the inhibition of irritational stimuli for but a short time results in such surcharge that it is manifested by headache, or in a wretched vicarious overflow upon other organs. We may have toothache in the ear, the stomach, or even in the hip,[1] and eye-strain may be manifest only in the brain, the heart, or the stomach. It is evident that some nervous organizations have more power than others of setting bounds to the unregulated overflow to innocent peripheral organs; some have better smoke-consumers than others. But, in most organizations, the penalty of such power, is headache. All these questions have a dynamic aspect as mathematically exact as thermo-chemistry or gravitation. Give the brain a power of estoping persisting irritational stimuli from their physiological reflexes, and you must supply means of dissipating the inhibited discharges. Such inhibitions and would-be dissipations are the (probably) vaso-motor cerebral disturbances manifested by headache. Intercurrent with the headache there is frequently gastric derangement. It is not clear just what the mechanism of this "sympathy" may be, but there can no longer be any doubt that eye-strain, with headache, may also produce such gastric troubles as dyspepsia, flatulence, emesis, gastralgia, anorexia, etc. Perhaps the gastric irregularity may be an early symptom of the impossibility of longer inhibition and denotes the first relief of tension by this overflow along the line of least resistance. At least,

[1] See, Brubaker, The Reflex Neuroses of Dental Pathology, Lea's American System of Dentistry.

in cases of extreme eye-strain, I have hardly ever failed to find some and often great gastric derangement coexisting with the headache. In other cases this point of weakest resistance is through the motor centres of the extremity-muscles, whence chorea. Should all the gateways present a watchful and firm barrier against the egress, the general tension may perhaps find relief only in that general explosion of many surcharged centres, that goes by the name of epilepsy—after which the brain is drained to a temporary condition of dynamic sanity.

We may now seek an answer to the question, What is the cause of the retention and inhibition of the ocular irritational stimuli, that results in so many evils? It must be a powerful force that can thus reverse the universal law of physiology whereby pain and congestion result in the organ irritated. What is the force that vicariously subjects the brain to injury and headache rather than the offending eyes? Or that, *comme dernier ressort*, will viciously wreak its vengeance upon innocent centers and organs by a reflex neurosis? I can imagine no power or motive strong enough to produce such a preposterous illogicality and injustice, except the all-penetrating and all-powerful one of sexual selection and sexual beauty. To put it brutally, a chemotic and blear-eyed girl would not be the beaux' favorite, and nature has purchased the clear conjunctiva and limpid beauty of the eye at the frightful expense of headaches and innumerable neuroses. It is no fallacy of sentiment that makes the eye the silently speaking exponent of the soul's deepest thoughts and emotions. To mar its beauty and travesty its expressiveness is a sin against the future and against the species, that deserves and receives nature's most solicitous care. The cerebral centers are compelled to inhibit the reflexes eyeward at whatever cost. The clear-eyed girl chooses, is chosen, marries, and begets clear-eyed daughters—clear-eyed, but, alas! they, all and several, are cephalalgics! If this seem mystical and far-fetched to conservative medical science, it may be urged that our profoundest naturalists and philosophers have not thought similar logic too weak to account for the evolution of the most profound morphological and psychological characteristics of a continental and a cosmic fauna. Before puberty the irritation-reflexes return to the eyes according to physiological law; after puberty, in women almost never, in men perhaps more frequently, but even in men the law is felt, though occupation and a robuster nervous organization prevents the disastrous consequences so often seen in women.

In this sexual factor may be found the chief reason for the fact that ocular strain is by a hundred fold the most fertile source of headache and neurotic disturbance in the otherwise physiologically well-conducted organism. If, according to man's experience, the burthen of love-song and history has been the wound of heart by beauty's eye-glance, the weapon has been two-edged and its polishing has injured the fair possessor quite as frequently as her captive. Add to this the almost equally important fact that eye-strain arises chiefly from subjecting the naturally and normally hyperopic eye to the short-range work demanded of every servant of civilization, and we at once have another potent reason for the astounding frequency of eye-strain. From these two causes we realize why eye-strain is so common, and also why it is so subtilely hidden away under the masks of headache and neuroses. Were still another premise needed for our logic it might be found in the fact of the imperial and transcendant importance, intellectually, emotionally and physically, of the organ of vision above all the other senses, and that disturbances of its mechanism must speedily and intimately injure the coordinations and harmonies of every part of our being.

Why do other peripheral irritations so much less frequently set up headaches and neuroses than eye-strain? For many reasons: Because no other organ is to a thousandth part so intimately bound up with our every act and thought and emotion, and so necessary to them all[1]; because no other organ at the end and completion of its development has unwarned had thrust upon it a strain so unusual and of a kind so wholly different from that experienced in its evolution; because no other organ is so complex, so delicate, so easily thrown out of adjustment; and, lastly and chiefly, because to other organs the reflexes may generally return, according to physiological law, in such a way as to answer the stimulus, without running counter to such a profound

[1] I cannot conceal the thought that, conspiring with the law of sexual selection and beauty there may also have been this of the profound utility and importance of this sense-organ to the welfare of the *individual* organism. Even as a unit (apart from race-instincts) it might be better that other organs, and even the brain itself, should vicariously suffer the punishment of ocular sins, rather than its most important function should be impaired and endangered by the inflammations that would result from the warnings and danger-signals of the properly returned reflexes.

law of the organism as that of sexual selection based upon sexual beauty and perfection.

Next to the eyes, perhaps the teeth are the most frequent source of reflex neuroses. Professor Brubaker's essay contains a highly interesting gathering of such instances. But in the reflex neuroses of dental pathology, the centripetal stimulus seems to be checked and reflected back, or derouted by subordinate ganglia that like the lymphatics act as outposts or advance guards to protect the higher centers from injurious attacks. The intimate and direct cerebral connections of the ocular mechanism render impossible such ganglionic skirmishers and pickets. In childhood, the ear seems to bear the brunt of the derouted dental reflexes, and many a case of deafness is due to impacted or carious teeth. Irregularities of the nasal functions and, to a greater degree, of the genital organs, may occasion cerebral and reflex neurotic phenomena, but far less frequently than those of the eye. All of these, however, are of sufficiently frequent occurrence to put the careful diagnostician upon his guard, and warrant a scrutinizing inquiry where functional derangements do not present their own explanations, do not yield promptly to treatment, and where eye-strain is certainly excluded by the mydriatic examination of a competent person.

These, then, are the practical lessons to be gleaned from the preceding pages:

1. In headache *always* suspect eye-strain, and especially in women in the years between puberty and middle age.

2. In functional gastric derangements, not quickly to be explained otherwise,[1] suspect eye-strain, and especially if headache coexist.[2]

3. In other functional derangements such as chorea, nervous heart, extreme irritability of temper, hysteria, etc., that do not yield to treatment, or that are not idiopathically or otherwise explainable, exhaust the possibility of a reflex neurosis from eye-strain or other peripheral irritation.

4. Have the refraction estimated, under a mydriatic, and the coordination of the external ocular muscles proved, by a scientific authority, *in the case of every child, before or by the age of puberty.*

119 South Seventeenth St.

[1] I have always wondered if Carlyle were ametropic.

[2] I have seen a case in which a monocular rhythmical ptosis lasting for ten days alternating with ten-day periods of persistent emesis, had kept up for two years, the whole due entirely to eye-strain, and disappearing with the relief of the same.

SOCIETY REPORTS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 21, 1889.

The President, ALFRED L. LOOMIS, M.D., in the Chair.

DR. CHARLES MCBURNEY read a paper on

The Treatment of Inguinal Hernia with Reference to Radical Cure,

in which he first mentioned a procedure adopted in three cases for radical cure of hernia, and accounted for the return of the tumor by the fact that, in addition to securing a dense cicatrix in the canal, he had failed to remove redundant peritoneum, and thereby to carry out an essential step in the operation, namely, to restore, at the point where the hernia begins, a tense, smooth internal surface of the abdominal wall. It is well known, he said, that in laparotomies where large drainage tubes are used for a considerable period, subsequent appearance of ventral hernia is more likely than where no drainage tube is employed. Where the walls are equally brought together and no drainage tube is used, a smooth, tense peritoneal surface lines the cicatrix, and hernia seldom occurs. In inguinal hernia the loose connective tissue which accompanies the cord and fills the inguinal canal, forms no formidable backing to the peritoneum. Thus to cure hernia radically one must radically remove the predisposing causes, namely, peritoneal laxity at the internal ring, and give sufficient support to the peritoneum at this point.

Having abandoned irritative injections, operators then began to devote most attention to sewing up the external ring with various kinds of sutures, ignoring the fact that a hernia coming down into the canal is quite capable of breaking any suture or cicatrix that might lie before it. Macewen's operation does not reproduce the desired smooth peritoneal surface at the internal ring; besides, the operation is extremely difficult, if not totally impracticable, in many cases. Objections also obtain against other operations referred to. It has seemed to him clear that to reach and operate upon the extreme upper part of the neck of the sac with certainty and safety, the surgeon should expose it fairly, and Dr. McBurney thought he had devised a plan of doing so, but afterward learned that it had been done

years before. When the anterior wall of the canal is split up to and a little beyond the internal ring one can make use of one of two methods: tying with a strong ligature; or cutting away the sac, and sewing the neck neatly and smoothly. In this way it is easy to restore the smooth condition of the peritoneum at the ring. This should now have a backing. Some operators are satisfied to have the support at the external ring, entirely ignoring the canal. This is obtained by sewing together the pillars of the external ring. But such sutures must either give way or cut through the dense pillars of the ring. Other surgeons pass the finger up the canal and trust to more active reparative formation following breaking up of the connective tissue to close the canal directly. Others pass sutures from one side of the canal across to the other, thus endeavoring to narrow it. The only certain measure for obtaining complete closure of the whole inguinal canal, except the portion occupied by the cord, is by the open treatment. But even this is uncertain. To insure firm and dense cicatricial tissue throughout the length and depth of the canal one must carefully pack by some dressing down to the transversalis fascia in the lower, and to the peritoneum in the upper, part of the canal.

Before operating, most careful antiseptic precautions are taken, especially in cleansing surrounding parts. The incision begins a little outside the inguinal ring, and extends sufficiently downward over the sac. This is rapidly deepened over the whole length of the canal, thus freely exposing the aponeurosis of the external oblique muscle. The superficial layers of the sac are now cleared away, and the two pillars are completely exposed the entire length. The sac is still covered below the external ring by fascia, which is now opened. The scissors are pushed under, and the canal is split a little beyond the outer edge of the internal ring. The deeper coverings of the sac are now cut off, this being best and most rapidly accomplished with the fingers. If now the transversalis is removed high up in the canal, it is quite easy to separate the cord from the sac. The cord now being separated from the sac a little within the abdomen, the whole sac is dissected out and lifted up. In some cases, as in congenital hernia, the sac must be cut away from the cord. The sac is now opened, and if intestinal contents are present they are reduced; if omentum, it is ligated, and cut away. Adhesions are broken down if any are exposed. The sac being now held up from the internal ring, the operator inserts one or two fingers through the neck a little way into the peritoneal cavity, to guard positively against return of a piece of omentum or intestine into the sac during the placing of the ligature. The ligature is placed about the neck of the sac at the highest point, the level of the peritoneum, drawn very tightly, and the part cut away. There is then a wound, the upper wall of which is formed by the edges of the skin, superficial fascia, external oblique aponeurosis and conjoined tendon; while the lower wall is formed by skin, superficial fascia, and a strip of aponeurosis or Poupart's ligament, including the outer pillar. The aim being to secure granulation to the bottom, it is not sufficient simply to pack the wound. Stitches are inserted, from four to eight in number, according to the size of the wound, to bind together the tissues which form the upper wall, and two or more tension sutures carried across the wound. The wound is now carefully irrigated, and dusted with iodoform throughout, and iodoform gauze is firmly packed the entire length down to the posterior wall. The scrotal or labial wound is sewed up without packing. Proper dressing is applied to prevent soiling of the wound. The dressing is changed once in four or five days. A clear scar forms in from five to six weeks, and is very strong. The patient is not afterward allowed to wear a truss or support of any kind, as pressure by a truss is regarded as injurious to scar tissue.

Dr. McBurney has done the operation thirty-six times in inguinal hernia. One patient, an old drunkard, died in delirium tremens. In only one has there been a relapse of the hernia, and that can be easily accounted for by a defective operation. The first operation was done only two years ago, consequently the time may not be long enough to convince some that the cure is permanent.

The paper was discussed by Drs. L. A. Stimson, A. G. Gerster, Abbe, McCosh, Hartley, Syms, Gibney, and Murray, most of whom had performed the operation and preferred it to any other.

—The *Journal of the Amer. Med. Association*, Feb. 23, says that the Chief of Police of Berlin has ordered the hospital authorities to note the numbers of the carriages in which patients are taken to the hospitals, and the nature of the diseases of the patients. When the patients are suffering from infectious or contagious diseases the carriages are to be disinfected.

REPORTS OF CLINICS.

PHILADELPHIA HOSPITAL.

CLINIC ON DISEASES OF WOMEN—DR. MONTGOMERY.

Dr. Montgomery, in speaking of oöphorectomy for the arrest of growth of uterine fibroids, said the removal of the ovaries and even of the tubes also does not necessarily arrest menstruation. In some women the menopause is delayed one or two years after the removal of these organs.

In diseases such as growths in the uterine walls, in which the menstrual flow is found to be continuing for years after the period at which it would be expected to cease, it is not unreasonable to fear that the removal of the appendages will fail to control the hemorrhages, and a second operation be necessary for removal of the growth. From this standpoint he advises removal of myomatous growths, where it is possible, in preference to oöphorectomy.

Remains of Extra-Uterine Pregnancy.

While upon the subject of abdominal surgery, he related the history of a patient upon whom he had operated a week before. The patient was married, the mother of four children, and had had several abortions from chronic metritis. Dr. Montgomery was called in December, the patient thinking she was again pregnant, and about to abort. She believed herself about five weeks pregnant. She had a free discharge of blood, but there was no enlargement of the uterus and the cervical canal was contracted. The discharge continued for over a week, and was attended with some pain and the throwing off of some membranes resembling decidua. He saw her again in January, when she was complaining of pain in the uterus and rectum, with a return of bloody discharge. Examination now revealed a fluctuating tumor posterior to the uterus, which pushed the uterus forward, and in this tumor could be felt a more solid mass.

The sudden appearance of the mass within a month, the symptoms of pregnancy, the bloody discharge containing decidual membrane, led him to believe an extra-uterine pregnancy present, with the fœtus in active growth. A few applications of electricity were made, but pain continuing and the tumor increasing in size, he was induced to advise operation.

The sac behind the uterus was formed by the matting together of the uterus, ovaries, and broad ligaments. It contained nearly a pint of fluid blood and a firm clot, in which was found some characteristic membrane. The cavity was thoroughly flushed out and both ovaries and tubes removed. These organs were removed, not only because of their being involved in the adhesions of the sac, but for ovarian and uterine distress from which she had been suffering for months. The subsequent progress of the patient had been exceedingly satisfactory.

Retroflexion.

The next patient was a woman forty-two years old, the mother of seven children, who had suffered pain in the pelvis for eight years and since the birth of her last child had menstruated every three weeks. An enlargement was found behind the cervix, which might be due to a number of conditions, viz: pelvic exudation, prolapsed and enlarged ovaries, fibroid tumor, and retroflexed uterus. The presence of exudation, Dr. Montgomery said, might be excluded by the fact that the mass was movable, smooth in outline, and could be readily raised up; that it was not an ovarian enlargement was evident from its close connection with the uterus; it was harder and more dense than would be expected in an ovarian growth, and there was absent the sense of fluctuation, and the marked tenderness characteristic of enlarged ovary.

The fact that the angle existing between the mass and the cervix could be erased by upward pressure against the fundus, and that the uterus could not be outlined by conjoined manipulation confirmed the suspicion of retroflexion of the uterus. If there was any doubt of the condition it might be still further confirmed by the use of the sound. If in spite of the presence of this mass the sound had passed forward in the normal direction and the fundus could be felt through the abdominal walls, it would be an assurance that the retrouterine mass was a fibroid growth. In the present case, however, the sound passed backward.

The uterus is frequently retroverted or retroflexed shortly after parturition, from the pressure upon the heavy organ by a tightly applied bandage. If one is called to a woman suffering from hemorrhage two or three weeks after confinement, let him examine with special reference to the presence of a retro-displacement.

In the treatment of retroflexion, Dr. Montgomery impressed upon the students the fact that the organ is not replaced by means of the pessary. The pessary serves a valuable purpose in retaining or supporting the replaced organ, but it is worse than useless before it has been replaced.

There are three principal methods of replacing the organ. 1. With the fingers. With the patient in the dorsal position, introduce two fingers into the vagina, with the middle finger in the posterior fornix push up the fundus, while the index is placed in front of the vaginal cervix and pushes backward. In this way the organ is acted upon as a lever. 2. With the uterine sound. The instrument is curved to pass the canal, is passed to the fundus, and then its external end moved through an extended arc in order not to injure the uterine membrane, and the fundus is thus carried upward. 3. By the genu-pectoral position and Sims's speculum, in which case we have the influence of gravity. In the latter course, it is usually necessary to draw down upon the cervix to secure replacement.

Now, the pessaries are of value, but a number of considerations are important. First, the pessary must be well adapted to the individual and fit so that its presence can give only comfort. Second, where retroversion or retroflexion has been of long duration it may be necessary to elongate the surface by the pressure of tampons preparatory to the introduction of a pessary. Third, there is a class of cases in which the displacement is redeveloped as soon as the restraining power is removed, in which the wearing of a pessary is very painful. There are cases in which there are bands more or less long between the posterior surface of the uterus and the anterior wall of the rectum. Relief is here obtained only by tearing the rectum from the uterus by introducing two fingers into the rectum above the uterus and dragging the anterior wall down while the uterus is pushed up by the thumb in the vagina.

Dr. Montgomery also spoke of the advantages claimed for electricity by Apostoli and others, who say that the uterus is supported by muscular filament running out between the folds of peritoneum; displacement indicates more or less paralysis of these filaments; hence electricity, through the restoration of the muscular power, holds the organ in position. This treatment has not done accomplished all its enthusiastic advocates claim for it.

As to Alexander's operation, he said that the ligaments become atrophied in marked displacements. The ability to draw them out is frequently restricted by attacks of cellular or peritoneal inflammation, so that the usefulness of the operation must necessarily be limited.

Where patients have suffered long and continually from an obstinate retrodisplacement, the abdominal incision and hysterorraphy seems to be the most feasible method of procedure.

MEDICAL CLINIC—DR. TYSON.

Bright's Disease.

Dr. Tyson introduced the first patient, a German, forty-six years old. He spoke of his having had small pox, scarlet, remittent and typhoid fever, but that he denied having had syphilis. When he came to the Hospital he had swelling in the elbows and wrists, albuminuria and purpuric spots. Three weeks later tube-casts we seen. He was now greatly improved, and, to the unaided senses, his disease would not be apparent. Examination of the urine, however, showed it to be a little turbid from flocculi which had to be filtered out, lest they might conceal a small quantity of albumin. Dr. Tyson said that if filtering does not separate the precipitated alkalies and bacteria, potash could be added and the urine warmed when they would be so thrown down with the phosphates that they could be easily filtered out.

After showing the albumin test and speaking of how acid albumin might not appear, though present, he showed the contact method, overlaying nitric acid with albuminous urine in a narrow tube. He spoke also of the methods with picric acid, for the successful working of which the alkaloids—especially quinine—must be absent. The ferrocyanide of potassium solution does not throw down the alkaloids and is a little more delicate than nitric acid. The mere presence of albumin is not sufficient to establish the presence of Bright's disease, for it might be due to pus or blood. The former is generally visible to the naked eye when in sufficient quantity to give the albumin reaction; the latter may be invisible, so that the microscope must be used to detect it. We may not *find* the casts, and still have Bright's disease; the amount of albumin may also be very small, and we fail to demonstrate its presence. In such a case, if there were no pus or blood corpuscles, we would have to fall back on general symptoms, to detect

the disease. If albumin and casts are present, it means more or less kidney disease; although after a patient has practically recovered a few casts may often be found for awhile.

But the term chronic Bright's disease includes not only the chronic form of parenchymatous inflammations, but also interstitial nephritis producing the chronically contracted kidney, and the amyloid kidney. In chronic parenchymatous inflammations, the tubules are at least the primary seat of attack, though later, the interstitial connective tissue is also involved.

The finding of albumin and typical epithelial casts in the urine, with the presence of dropsical swelling, indicate the existence of acute Bright's disease. Other symptoms are the presence of blood, rendering it smoky, a diminished quantity of urine, and uræmic convulsions or other nervous phenomena dependent on retention of urea and other constituents of the urine.

In the treatment of acute Bright's disease he advised: 1. Rest in bed, which is often sufficient. 2. In the beginning determination of the character and quantity of urine. 3. To act thoroughly on the bowels, after which we will get a better effect from diuretics. 4. Diuretics, of which the best is digitalis, in the shape of the tincture in fifteen drop doses three or four times a day, or the infusion, a half ounce as often; but these large doses are not to be continued long. 5. If the case is very bad, cause sweating by (*a*), hot water cloths and bottles of hot water—a steam bath which is better than (*b*), the dry hot-air bath, which can often be rendered more efficient by slightly wetting the patient first; (*c*), if uræmic convulsions are present hypodermics of one-fourth to a third of a grain of nitrate or hydrochlorate of pilocarpine may be used, and if the patient does not soon sweat, one-fourth of a grain more may be used. 6. In severe cases it is desirable to apply counter irritation to the region over the affected kidneys. Wet cups may be used, and then a flaxseed meal poultice with mustard, the patient being always warmly covered in bed. Even blood letting may be done in convulsions, and in case of convulsions from puerperal nephritis it should always be employed.

—Dr. B. Alexander Randall has been elected Professor of Diseases of the Ear, and Dr. Edward P. Davis Professor of Obstetrics and Diseases of Children in the Philadelphia Polyclinic and College for Graduates in Medicine.

New York Correspondence.

What Prof. W. Gill. Wylie Thinks of Pessaries.—Dr. Bulkley's Clinic.—Annual Address before the Alumni of Bellevue Hospital.—Dr. Carpenter's Treatment of Tapeworm.

New York, Feb. 18, 1889.

Dr. Wylie, Professor of Gynecology in the New York Polyclinic, gave a lecture and clinic on displacements of the uterus on February 14. He considers anterior displacements of little importance; it is usually only in posterior malpositions that treatment is called for. This treatment in his opinion should *never* be by pessaries. In his hospital, for the past several years, he has known only one to be used. They simply support the uterus without reaching the cause of the displacement. Furthermore, they are dangerous, because of their liability to infect the patient. They abrade the mucous lining of the vagina and, opening up the canal, allow free entrance of the air to the abrasion. He has often found women wearing the instruments for months and years without relief, whereas they have been quickly cured by curetting and the use of boroglyceride tampons. The tampons are a favorite method of treatment of many diseased conditions of the vagina and uterus with Prof. Wylie, and he uses them continually to support the uterus in displacements. The tampons are made by cutting sheet borated-cotton into strips, an inch and a half or two inches wide, and rolling them up, with medium firmness, until they are of the desired diameter, preferably about half an inch or a little more. They are then wet with the following:

℞ Boroglyceride . . . . . f℥j
Glycerine . . . . . f℥xiv

Mix and add a saturated solution of alum, containing ℥ss–j of the salt.

Prof. Wylie also thinks Alexander's operation of shortening the round ligaments rarely necessary, for, if the cause of the displacement is treated, the malposition can, in most cases, be cured.

Prof. L. D. Bulkley, at his clinic in New York Hospital, February 13, exhibited a case of leprosy. The patient was a woman, 21 years old, a native of Antigua, West Indies. Her family history revealed nothing, the father having died at the age of 74 and the mother and two brothers are still living and healthy. The patient came to this country three years ago. A year earlier a measly rash had appeared on her body

and, in March, 1886, it was replaced by a papular rash on the arms, hands and scalp, with intense itching. Since then the disease has advanced steadily, until now the face, ears and lips are swollen, white and infiltrated. The voice is husky and the mouth very sore, with fissures on the lips. The arms and forearms are infiltrated and anæsthetic. There is hyperextension of the last two phalanges of the fingers, though the patient sews without difficulty and the sense of feeling is not greatly impaired. The feet and toes are also infiltrated, and there are ulcers and scars on the legs. Dr. Bulkley does not consider the disease contagious, and he cited the case of a priest in a leprous settlement in the Sandwich Islands, who did not contract the disease for seven years and, at last, had his scalp infected by flies. The doctor has had two cases in which he used eucalyptus and chaulmoogra oils, but without effect. This patient not being under his care, no treatment was recommended.

The second patient was a woman 19 years old. She was always well until three years ago, when a small tubercle appeared on the left side of her nose. Since then many more have grown on her face, hands and arms, while the one on her nose has increased to the size of a filbert. The diagnosis, which was confirmed by microscopical examination, was diffuse fibro-sarcoma. Four years ago the patient had an ulcer of the cornea. Iodide of potassium has been used and one growth was scraped, which caused it to disappear. Dr. Bulkley decided to try arseniate of soda by hypodermic injection.

The next patient was a man, 63 years old, who gave the history of being a moderate drinker. When he was 22 years old, his nose began to enlarge and an acne rosacea appeared on it. It developed into a syphilitic process and grew gradually, till now it is exceedingly large and bulbous, red, soft and pulpy to the touch, and the seat of some ulceration. Dr. Bulkley proposed, after thorough syphilitic treatment, to make an incision in the median line, down to the cartilage, scrape away the hypertrophied tissue and removing a wedge-shaped piece. Then by uniting the flaps he expects a respectable-looking nose. The process he diagnosed as rhinophyma.

The annual address, before the Alumni Association of Bellevue Hospital, is to be delivered, in April, by Dr. William Osler. The address will be followed by a banquet.

The late Prof. Wesley M. Carpenter had a favorite treatment for tapeworm, which is as follows: The patient is to eat his breakfast as usual and then eat no more till after delivery of the worm. At 6 A. M., on the second day, he is given Epsom salt ℥j; at 9 A. M., calomel gr. x; at 9.30, decoction of pomegranate f℥vj; at 10.30 A.M. f℥iv of the same, and then "look for the worm." The treatment is perhaps a little severe, but it brings the worm, head and all. The decoction of pomegranate is made by adding eight ounces of the *fresh* bark to one quart of water, and boiling down to ten ounces.

PERISCOPE.

Influence of the Electric Light on the Eyesight.

Dr. Dubinski of Kronstadt has had an opportunity during the last ten years of observing thirty cases of a peculiar ophthalmic affection occurring in young sailors whose duty had obliged them to remain in the vicinity of electric lights. The symptoms of this affection, which he proposes to denominate "photo-electrical ophthalmia" may occur during sleep. The patient is awakened by profuse lachrymation associated with intense peri-orbital pain. Photophobia is extreme. Nothing, however, can be seen upon examination except palpebral œdema and pericorneal injection of a very marked character. With the ophthalmoscope hyperæmia of the papilla is found, and sometimes a venous pulse in the retinal vessels. After a time varying from an hour and a half to three hours these symptoms subside and the patient is able to go to sleep, and the next morning he awakes quite well, with the exception of a certain amount of ocular fatigue such as is caused by reading late at night. Sleep appears to be an indispensable condition for the manifestation of photo-electrical ophthalmia. Thus, in the case of men who have been exposed during the morning to the electric light, when they take a midday nap the disagreeable phenomena wake them up at that time, and not during the succeeding night. Although the patient, when awake, suffers slightly from phosphenes, he is quite able to read and write during the evening. The pathological cause of the symptoms above described would appear to be a hyperæmia of the optic nerve and some lesion of the nervous filaments of the cornea.—*Lancet*, Feb. 9, 1889.

THE
MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

CHARLES W. DULLES, M.D.,
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PRESCRIBING OPTICIANS.

The competition between opticians in American cities has grown so keen that the newspapers contain many seductive advertisements, bidding for the trade of individuals suffering with defective vision. Not satisfied with attempts to attract customers by the bait of asserted reductions in prices, many opticians add that at their shops eyes are examined without charge. But this ought not to be. Since ophthalmology has grown into a positive science, it is a grave mistake for opticians to take upon themselves the responsibility of prescribing glasses without the scientific knowledge necessary for this work. Prescribing glasses can only be done correctly with a positive knowledge of the anatomy and physiology of the eye, and day after day oculists are brought into contact with patients who are wearing glasses entirely unfitted for sight. Not only this, but itinerant venders of "crystals" even go so far as to prescribe glasses for headaches, pains, and failing vision, with an assurance that would startle an educated physician. It is within our knowledge that an optician of this city advised a patient, who had been most thoroughly and scientifically examined by a competent oculist, to discard the glasses given by this physician and to wear glasses to which the optician gave a high sounding name, stating that it was not glasses for seeing that he required, but simply "rest glasses."

The observation of careful ophthalmologists indicates that many individuals are given glasses which are worse than useless, and that in some instances so much valuable time is lost that subsequent intelligent treatment is of no avail—some of these are cases in which, if a proper ophthalmoscopic examination had been made and suitable drugs had been prescribed, the patient would have retained vision.

Such a case recently occurred in this city, where a young woman found her vision failing, and, on the advice of her friends, went to an optician, who examined eyes without charge, sold her a pair of glasses, and sent her home with the assurance that all she needed was "rest-glasses." A few weeks passed by, during which her vision grew gradually worse. Another consultation with the optician was held, and another pair of glasses was prescribed. This performance was gone through with twice more, with four changes of glasses in six months; and by this time the patient's vision was reduced to counting fingers at a distance of five feet. At this time an ophthalmoscopic examination revealed the unfortunate fact that the patient has post-neuritic atrophy of both optic nerves. Another case that might be

cited is that of a little girl who was found wearing myopic glasses, given her by an optician, when an examination showed that she was exceedingly far-sighted.

It would not be hard to multiply illustrations of the injurious effects of the practice we have been commenting upon. It does not extend to all opticians; for there are a few honorable exceptions who refuse to furnish glasses when they discover visual defects. But too many dealers in spectacles have no compunctions about usurping the province of ophthalmologists, and yield to the temptations of profit and the unwise solicitations of their customers to do what they have no right to do. In acting thus they sometimes screen the first of these motives behind the second, and affect an air of philanthropy as they exclaim against the high charges of the skilled oculists. But this is a shallow subterfuge; for the charges of oculists vary with the circumstances of patients, and those who cannot pay them can get their eyes examined for nothing if they wish. And, while we may pity the ignorance of persons with defects of vision, who for mere motives of economy prefer to consult dealers in spectacles rather than physicians who make a specialty of treating these defects, we can only condemn these dealers who, knowing the risks their customers run, encourage their error for the sake of gain.

The time will yet come, we hope, when the practice of treating eyes without proper fitness for such delicate work will be punishable by law as other unwarranted assumptions of medical practice are now punishable.

Indeed, we believe that the laws now in force in the State would cover this case, and that a person who could show that his eyes had been maltreated by an optician would have little difficulty in recovering damages How far the rights of a dealer to sell his wares would protect an optician who combines with his business the custom of examining the eyes and otherwise imitating the regular methods of legally qualified practitioners of medicine, it is hard to say; but it would be interesting to have a test case brought before one of the courts.

DELIVERY OF THE PLACENTA.

Only a few years ago there was a fairly general agreement among obstetricians concerning the proper method of managing the third stage of labor. Nearly all agreed that nature should not be trusted fully in any case, and that art should always be employed in conducting this stage of labor. The method that was in such favor, as is well known, was that of Credé. Of late, quite a change has come about; the teachings of Credé are by no means so universally accepted, and have even been most strongly assailed in the country of their origin.

The methods of placental delivery which have strong champions at this time are: the method of Credé, the expectant method of Ahlfeld, the method of Berry Hart, and the ancient method of traction on the cord.

The method of Credé practically consists in following down the uterus with the hand, placed on the abdomen, as the child is delivered; making gentle friction with the hand to excite the uterus to contraction; during the height of the contractions compressing the uterus, using all gentleness so as to separate and expel the placenta from the uterus; and then to making downward pressure to expel the placenta from the vagina. The placenta may be delivered during the first or second, or not until the tenth pain. According to Lusk delivery is completed by one skilled in the method in from five to ten minutes after the birth of the child. According to Credé the time for expressing the placenta should depend upon the conditions in the individual case; and the operator should have three different objects in view: 1, the removal of existing dangers; 2, the avoidance of threatened

dangers; and 3, the saving of time. The propriety of the first object is universally admitted. The second object is to be accomplished by efforts at expression, as already described. Usually from fifteen to thirty minutes are consumed in the process. There can be no objection to the third object, if in its accomplishment the woman is not injured.

The most prominent opponents of the method of Credé are Ahlfeld, Hart and Charpentier, the objections offered being that it is brutal, that it interferes with the normal mechanism of labor, that it produces increased loss of blood, and that it is the direct cause of the retention of pieces of membrane and placenta. The first objection is founded upon a failure to understand the way in which Credé's method should be carried out. To the second it is difficult to reply, since the nature of the mechanism of the third stage of labor is in dispute, and the evidence supports the view that there are several normal mechanisms. The third objection assumes a result of the method which is contrary to the experience of those who have used it most frequently. The last objection is unquestionably well founded; and it seems safe to assert that a direct relation exists between the percentage of cases of retention, and the rapidity with which the secundines are delivered.

The method of Ahlfeld is called the expectant method, although without entire justification. It consists in attending to bleeding wounds after the birth of the child; and in cleansing, drying, and making comfortable the patient. At intervals of five minutes the cloths applied to the vulva are inspected to see if the discharge of blood is normal. In most cases the cloths need not be changed for one and a half hours *post partum*. Then the urethra is cleansed, the urine is drawn, and the placenta is expressed.

When continuous hemorrhage ensues—not due to injuries—massage is performed. If the hemorrhage is now arrested the expectant method is resumed; but if massage fails to arrest the hemorrhage the placenta is expressed at once.

The semi-expectant method of Ahlfeld does not seem destined to wide adoption. The practitioner loses the guaranty against *post-partum* hemorrhage, which an earlier delivery ensures, and especially the knowledge which is gained by keeping the hand over the uterus until, and for some time after, labor is completed. He also loses the extra time which this plan demands of him.

Hart's method of conducting the third stage of labor is as follows: When the child is born the accoucheur must ascertain that the fundus uteri stands at or below the level of the umbilicus, and that the uterus does not contain a second fœtus. Then an ergotin injection is given in multiparæ, especially if labor has been slow. The cord is not tied until the child cries freely, and then only one ligature is applied, on the placental side of which the cord is cut; the fetal end being allowed to drain thoroughly of its contained blood, after which a second ligature is applied to prevent soiling the bedding. The second ligature must be applied at once in case of twins. Before attending to the cord it should be ascertained by abdominal palpation that the uterus is not so relaxed as to bleed. The hand must be kept over the uterus; nothing is to be done when a good contraction comes on, and the uterus is to be allowed its normal relaxation after the pain is over. Should bleeding from the uterus come on, or the pains be feeble, the uterus must be grasped so as to bring on a contraction and to arrest the hemorrhage. Nothing farther is done in a normal case until the lessening bulk of the uterus shows that the placenta is separated and being expelled; then the expulsion may be aided by expression. One can tell when the placenta is separated but not driven down by noting that gentle expression drives it down.

While not passing upon the theoretical

views upon which this practice is founded, the method appears to have much to recommend it. The hand rests over the uterus, so the practitioner is not appalled at sudden hemorrhage. The uterus is allowed to cast off the secundines—and this appeals to the physiologist. We are as yet however in want of full information regarding the method; more especially in regard to the time required for the natural separation of the secundines. The propriety of using ergot until labor is completed is questionable.

The ancient method of delivering the placenta, by traction on the cord, recently championed by Charpentier, opposed as it is to the natural method of delivery, and having inherent dangers possessed by no other method, must be regarded as obsolescent if not obsolete.

The renewed interest in, and the differences of opinion concerning, the proper management of the third stage of labor should prove instructive. The principal objection which is urged against Credé's method is, that it is too meddling. Many obstetricians who are supposed to accept Credé's teachings practically admit this, for they advocate waiting some fifteen or twenty minutes after the birth of the child before resorting to efforts to deliver the placenta. This may prove to be the solution of the problem. By it the patient is ensured against hemorrhage because the attendant's hand rests on the womb; the uterus is given an opportunity allowed to separate the placenta; and the practitioner's time is not unduly taken.

THE MEDICAL EXAMINER'S BILL.

Some of our readers may have been surprised to hear a rumor that the Faculty of the Jefferson Medical College was opposed to the passage of the Bill to appoint a Board of Medical Examiners which is now before the Legislature of the State of Pennsylvania, and to which we have already referred editorially a number of times. It is pleasant to call attention to the fact that this rumor is incorrect, and that it has been officially denied by the Dean of the Jefferson Medical College, as will be seen by reference to the letter published in the columns for Correspondence in this number of the REPORTER.

We think no respectable medical school in this State could be silent when classed with those who are inimical to this bill, and we hope that the influences which are now said to be working in secret to bring about its defeat may not prove successful on account of any lukewarmness on the part of those who ought to be found among its active and earnest supporters.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

TRANSACTIONS OF THE ROYAL ACADEMY OF MEDICINE IN IRELAND. VOL. VI. EDITED BY WILLIAM THOMSON, M.A., F.R.C.S., General Secretary, Surgeon to the Richmond Hospital, Dublin. 8vo, pp. xxxvi, 482. Dublin: Fannin & Co., 1888.

In the opening pages of this volume we learn that the Academy of Medicine in Ireland has, since its Transactions were last published, asked for and received authority from the Queen of England, to add the word "Royal" to its title; and so this distinguished body has testified its loyalty to the government of Great Britain and received a recognition which is highly prized on the other side of the Atlantic. But it needed no such patent to recommend it to scientific men; for it has long been the source of medical and surgical papers of great value, and its Transactions are equal in scientific worth to those of any medical body in the world.

The present volume fully maintains the standard of its predecessors. It is a matter of regret that the limits of our space forbid a detailed notice of the papers it contains; but we may say that every department of medical science is ably represented in its pages, and that the powers of observation, the skill and the judgment of our Irish *confrères* are abundantly illustrated in it. The volume is a mine of information, and would be a valuable acquisition to any studious physician or surgeon.

LITERARY NOTES.

—B. Westermann & Co. announce the intended publication of an *Internationaler Centralblatt für die Physiologie und Pathologie des Uro-genital-Systems.* There will be one volume a year, issued in about 8 parts, and the list of editors contains the names of some of the most eminent surgeons in Europe.

CORRESPONDENCE.

Treatment of Locomotor Ataxia by Suspension.

TO THE EDITOR.

Sir: In the REPORTER, February 23, 1889, there is a very interesting and practical editorial on "Treatment of Locomotor Ataxia by Suspension," in which you say: "The method of Motchoukowsky is simply suspension, as usually practised when a plaster jacket is applied for disease or deformity of the spinal column." If it is not asking too great a favor, will you kindly inform me whether the suspension is by the chin and occiput and the armpits, or by the chin and occiput while the patient draws on the rope with his own hands.

Yours truly,

STANTON ALLEN, M.D.

Brooklyn, New York,
March 2, 1889.

[The suspension is by the chin and occiput and the arm-pits.—Editor of the REPORTER.]

The Medical Examiners' Bill and the Jefferson Medical College.

TO THE EDITOR.

Sir: The following letter explains itself, and I would be glad if you think it proper to publish it in the MEDICAL AND SURGICAL REPORTER.

Yours truly,

LAWRENCE F. FLICK, M.D.

Philadelphia,
March 6, 1889.

FEB. 25, 1889.

Lawrence F. Flick, M.D., Chairman of Committee.

Dear Sir: In reply to your letter of the 18th inst. I beg to state that the rumor of opposition to the medical bill on the part of our faculty is incorrect. We have not considered the matter formally.

The members of our faculty are not opposed to any medical bill that is favored by the general profession of the State.

Respectfully and truly yours,

J. W. HOLLAND, M.D.,
Dean.

—The *Chemist and Druggist*, Feb. 16, states that a statue of Gay-Lussac is to be erected in August, at Limoges, when the French Society for the Advancement of Science is to hold its annual meeting at the date mentioned.

NOTES AND COMMENTS.

Cure of a Case of Leprosy.

In the case reported (*Monatshefte für praktische Dermatologie*, No. 23, 1888) by Dreckmann, the disease was fairly advanced, had lasted four years, and presented numerous nodes, tubercles, and patches of infiltration. There was also marked anæsthesia of the feet, legs, and hands. The mucous membrane was also involved; swelling of the conjunctivæ, a discharging ulcer in the nasal septum, whitish patches on the larynx posteriorly, thickening of the left vocal cord, a small tubercle on the point of the epiglottis, and hard nodular infiltration of both tonsils. The patient, a Brazilian, forty-two years old, was at this time, thin, pale, and weak. The treatment, by means of pyrogallic acid, chrysarobin, and salicylic acid, together with the internal use of ichthyol, as suggested by Unna, was instituted; and finally, in the course of several months, all vestiges of the disease had disappeared, and the patient had grown stout and strong.

The pyrogallic acid was applied mainly to the hands, feet, and legs, in the form of a ten per cent. salve; upon the other parts a salve of chrysarobin, of the same strength; these were applied twice daily. To obstinate nodules and patches of infiltration the same remedies were used in the form of plaster-mulls. To the face a salicylic acid and creasote plaster-mull was applied, once daily. Discrete and sharply circumscribed nodules, when conveniently situated, were excised. The conjunctival swelling disappeared spontaneously. The ulcer in the nose, the nodules on the tonsils, etc., were successfully treated with the actual cautery. The constitutional treatment consisted mainly in the administration of ichthyol, beginning with six grains daily, and gradually increasing to forty-five grains. Under the use of these measures, the writer states, an apparent cure resulted—the general health being restored, and all evidence of the disease dissipated.

As incidental points of interest in the report, may be mentioned that the patient's wife had developed the disease eighteen years before; the wife's brother was also affected. The children, four in number, from fifteen to twenty-one years old, showed no sign of the disease. The patient's parents and six brothers, all living in the same neighborhood, were also healthy.—*American Journal of the Medical Sciences*, March, 1889.

Ignipuncture of the Tonsils.

Dr. Wilhelm Roth, of Fluntern, finds that in order to reduce the size of the tonsils without risk of troublesome hemorrhage, which is not uncommon, especially in young subjects, the best plan is to employ ignipuncture, as has been recommended by Krishaber, and more recently by Verneuil. The tonsils and neighboring parts are first brushed over with a ten to twenty per cent. solution of cocaine. The finest point of the thermo-cautery, heated to redness, is then inserted to a depth of about five millimetres in three or four spots a few millimetres apart from one another on the tonsils. The instrument is not allowed to remain more than one or two seconds in the tissue. The whole operation, including both tonsils, can be performed in a very few minutes without any bleeding, and with scarcely any pain. It must be repeated four or five times at intervals of two or three days, and this is usually sufficient to cause the tonsils to return to their ordinary condition.—*Lancet*, Feb. 16, 1889.

Hysteria in the Russian Army.

According to Dr. Ozeretskofski, of Moscow, the existence of hysteria amongst Russian soldiers is by no means an exceptional occurrence. The affection presents the same diversities of form that it does amongst women. Frequently men suffering from this affection are put down as malingerers. Other cases are looked upon as instances of serious but somewhat obscure organic disease, the true nature of the case being nearly always overlooked, because it is not generally supposed that soldiers are liable to hysteria. So real, however, does Dr. Ozeretskofski consider the existence of this male hysteria, that, having had an opportunity of studying no less than thirty-eight cases in the Moscow Military Hospital, he is convinced that hysteria ought to be recognized as one of the affections which entitle the subject of it to exemption from military service.—*Lancet*, Feb. 16, 1889.

Round Ulcer of the Stomach.

Dr. Cherbakoff, of Moscow, in order to study the conditions under which gastric ulcers occur, injected a solution of chromate of lead into the gastric arteries of dogs, with the result that ulcers were produced which bore a considerable resemblance to ordinary round gastric ulcers in the human subject. These experimental ulcers, however, evinced a great tendency to heal rapidly and completely. This tendency could be combated by increasing the acidity of the gastric juice. Indeed, by this means it was found possible to cause the ulcers to become deeper and deeper until they perforated all the coats of the organ. Clinically speaking, these results would appear to be not devoid of significance, as it is well known that round ulcer of the stomach is frequently associated with hyper-acidity of the gastric juice.—*Lancet*, Feb. 9, 1889.

Iso-Nitroso-Antipyrin.

Reference has already been made in the REPORTER to the alleged toxic effects of the salt (iso-nitroso-antipyrin) which results from the addition of antipyrin to sweet spirit of nitre. Dr. H. C. Wood and Dr. John Marshall have recently investigated the truth of the asserted toxicity of this salt, and they report the results of their investigations in the *Therapeutic Gazette*, Feb. 15, 1889. It was found that the crystals changed in color from green to brown, and developed a very distinct hydrocyanic-acid odor after standing a few hours. The quantity of cyanogen produced in this decomposition, however, is not large, and therefore, they say, could hardly be a cause of serious trouble.

In determining whether the iso-nitroso-antipyrin possesses toxic properties or not, it was administered under various conditions to dogs and rabbits, but in no case, as their experiments show, were the slightest untoward effects observed.

A New Tænicide.

M. Thiel (*Journ. de Méd. de Paris*) has examined the bark of a tree known as the "moussena," the *Acacia anthelmintica* of Baillon, growing principally in Abyssinia, and having a high reputation as a destroyer of tapeworm. It is said to be more active than koussoo, and to have a less disagreeable taste. The bark is the only part of the tree employed medicinally, and this is taken in the form of powder in doses of from one ounce to two ounces, alone, or mixed with honey and stirred up in milk. The Abyssinians mix the powder with flour, and make bread with it, and take a sufficient quantity of the bread with butter or honey three hours before the first meal in the morning. The same evening or the next day the worm is generally expelled in fragments. M. Thiel has found in the bark a substance whose chemical characteristics resemble saponine, and he calls this "moussenine."—*Chemist and Druggist*, Feb. 9, 1889.

Extraction of a Foreign Body from the Uterine Cavity.

At the last meeting of the Imperial Royal Medical Society of Vienna, Dr. Herzfeld reported the following interesting case: On December 30, a woman came into the clinic of Prof. G. Braun, of Vienna, stating that she had washed her vagina in the morning, and that the mouth-piece of the syringe was left behind; vaginal examination showed that no foreign body was present in the vagina. A sound was introduced into the uterine cavity, and the foreign body was then detected. The cervix uteri was dilated, and the foreign body extracted; it proved to be the handle of a crochet-needle. Answering the question as how this foreign body had found its way into the uterine cavity, the woman stated that she was twenty-five years old, and had already been confined of four children. As she did not wish to have more children, she was accustomed, at the instance of her midwife, to wipe her uterine cavity after each sexual intercourse. For this purpose, she used to press down the uterus through the abdominal parietes, and to introduce into it a crochet-needle around which was wrapped a piece of cloth; on one occasion the handle of the needle was left behind in the uterine cavity. Dr. Herzfeld remarked that usually such manipulations are only undertaken for onanistic reasons or for causing abortion; two similar cases had been reported by Prof. M. Hofmann, of Vienna. Such occurrences are important from a medico-legal point of view.—*Medical Press and Circular*, Jan. 30, 1889.

Prize Essays.

The following prizes are offered by the Academia Médico-Quirurgica Espanola: 1. For the Academy Prize: a critical estimate of antiparasitic remedies in medicine, surgery and obstetrics. 2. For the Morales Prize: a critical estimate of lithotrity, lithotomy, litholapaxy, and perineal and suprapubic cystotomy. The Academy Prize is a sum of 250 pesetas (about $50) and the title of Corresponding Fellow; the Morales Prize is a sum of 750 pesetas (about $145), with the same title. Essays may be written in Spanish, Portuguese, French, Italian, English, or German. Fellows of the Academy are excluded from competition. The essays, bearing a motto, and accompanied by a sealed envelope containing the name of the author, should be sent to the President of the Academy, Montera, 22 *bajo*, Madrid, on or before September 15, 1889. Every essay sent in shall remain the property of the Academy.—*British Med. Journal*, Feb. 9, 1889.

International Congress of Dermatology and Syphilography.

An International Congress of Dermatology and Syphilography is announced to take place in Paris, in connection with the Universal International Exhibition of 1889, on August 5 to 10. It will take place in the Museum of the Hôpital Saint Louis. The Presidents are Dr. Ricord and Professor Hardy. Dr. Colcott Fox and Mr. Malcolm Morris are Secretaries for London; Dr. Feulard, Chef de Clinique de la Faculté à l'Hôpital Saint Louis, is the General Secretary. The subscription is 25 francs, which entitles the subscriber to the volume of reports of the Congress. The subjects arranged for discussion are *A* the constitution of the group lichen: 1. Should the denomination of lichen be preserved for a number of affections which modern authors consider to differ one from the other? 2. If not, which affection should be separated; and if a new group of lichens be constituted, what forms should be admitted into it? *B* Pityriasis rubra and generalized primary exfoliating dermatitis: 1. What are the characters proper to pityriasis rubra, and how should those various types be distinguished? 2. Is pityriasis rubra pilaris a species of pityriasis rubra, or a special affection, or a variety of psoriasis? 3. What are the relations between scarlatiniform erythema and generalized primary exfoliating dermatitis? Other questions relate to pemphigus, trichophytic dermatoses, the treatment of syphilis, and the relative frequency of tertiary syphilis. Suggestions are also made as to voluntary papers. Members proposing to take part in the Congress and send communications are requested to communicate with the Secretary before May 15, and to forward a brief summary of their papers. The summary will be printed *in extenso* or in part in the general programme, which will be distributed before the opening of the Congress. This programme, which will be issued at the beginning of the month of July, will contain the names of members who have signified their intention to be present and have paid their subscription before May 15, the order in which they are down to speak on the subjects announced, the order of the day, and promised communications.—*British Med. Journal*, Feb. 9, 1889.

NEWS.

—Dr. Carey A. Evans died in Delphos, Ohio, Feb. 16, at the age of 60 years.

—Dr. H. G. Norton, of Imlaystown, N. J., will remove to Trenton, N. J., about April 1.

—In a suit recently in Boston to recover damages for the extraction of a sound instead of a decayed tooth, the plaintiff has been awarded $150.

—A building on West Forty-third Street, near Fifth Avenue, has been secured for the new academy and library of the New York Academy of Medicine.

—Dr. Loomis, of New York City, has been sued by the widow of the late Dr. Miller to compel him to pay for literary work said to have been done for him by Dr. Miller.

—At a recent meeting in London, presided over by the Lord Mayor, Mr. Algernon Coote suggested a plan for collecting 500,000 pence weekly—about $500,000 annually—to relieve the London Hospitals of debt.

—The Trustees of the William F. Jenks Prize Fund have made arrangements with Messrs. P. Blakiston Son & Co. to publish the successful essay on the "Diagnosis of Extra-Uterine Pregnancy," which, as announced in the REPORTER Feb. 23, has been awarded for this year to Dr. John Strahan, of Belfast, Ireland.

—The Executive Committee of the Medical Society of Virginia has appointed the following physicians to fill vacancies in the Medical Examining Board of Virginia: Drs. James W. Tankard, Dr. Paulus A. Irving, and Dr. Leigh Buckner. The *Virginia Medical Monthly* speaks highly of these men. The physicians whose resignations created the vacancies are Drs. W. W. Douglass, J. Herbert Claiborne, and Oscar Wiley.

—The Philadelphia *Ledger*, Feb. 16, says that the morphine habit has become so prevalent in San Francisco as to give rise to a peculiar slang applying to it and its votaries. The latter are called "morphine fiends," and the process of hypodermic injection is called "taking a shot." Hospital surgeons say that the morphine habit is increasing rapidly, and that most of the victims were initiated in Chinatown. One of these officials estimates that 60 per cent. of the petty offenders sent to the receiving hospitals of the city prison are victims of the morphine habit. Cocaine is so expensive that few acquire the "habit."

HUMOR.

MRS. HAYSEED—So young Wiggins is dead. I wonder what he died of?

Alonzo Hayseed (from college)—I heard it was pulmonary phthisis.

Mrs. H.—Land o'Goshen! and me thinkin' all the time the fellow had the consumption.—*America.*

NOTING a particularly healthy-looking child the other day, a lady asked the nurse, who had it in charge:

"Is that a nursing baby or a bottle baby?"

"Sure it's nayther, Ma'am; it's a condensed milk baby."—*Exchange.*

PHYSICIAN (arousing a tramp one morning from a nap on his doorstep)—Here, what is the matter with you? Can't you move more lively?

Tramp—I'm feeling pretty bad, boss, and can't be expected to move in a hurry.

P.—What's the matter?

T.—I've been at death's door all night.—*Boston Budget.*

A BANGOR lady was very ill a few days ago, and a physician was called, who prescribed for her. The prescription was given to a servant girl, who was directed to take it to a drug store and have it filled. She went to the drug store, but, instead of carrying out her instructions, bought a postage stamp, placed it upon the prescription and dropped it into the post office. In a short time it returned to the physician who gave it. It may be well to add that the lady did not die from the delay in receiving the medicine.

OBITUARY.

D. WILLARD BLISS, M.D.

Dr. D. W. Bliss, of Washington, D.C., died Feb. 21. He had been in poor health for several months, and two days before his death was stricken with paralysis from cerebral hemorrhage. Dr. Bliss was born in Auburn, N. Y., in 1825, and was graduated from the Western Reserve Medical College in 1850. Until the outbreak of the late war he practised medicine in Grand Rapids, Mich. In 1862 he was placed in charge of the Armory Square Hospital, the largest in Washington during the war. It held at times as many as 12,000 to 15,000 soldier patients. In 1865 he resigned this position and engaged in general practice in Washington. Dr. Bliss was present at the death bed of President Lincoln, and, as is well known, was the attending physician during President Garfield's long illness.